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THE MAGAZINE OF MOTION PICTURE PHOTOGRAPHY

THEATRICAL • TELEVISION • 16mm COMMERCIAL • AMATEUR

Setting focus for a cockpit scene for "United 6534," photographed by Ed. McGlone.

THIS MONTH

- **Animation With Puppets**
- **Set Lighting By Remote Control**
- **Reflected Light For Color Photography**

NOVEMBER
1951

PHOTO BY FRANK TANNER

Ready to "ROLL 'EM"

. . . another "take" on Du Pont "Superior" 2

"A Millionaire for Christy"—a Thor Production by Bert Friedlob for 20th Century-Fox—is another fine picture produced this year on Du Pont Motion Picture Film. Co-starred in this sparkling new comedy are Fred MacMurray and lovely Eleanor Parker.

On the set—and ready for a "take"—are Miss Parker, director George Marshall and the camera crew. Seated at the camera is Academy Award-winning cinematographer Harry Stradling, A.S.C.—long an enthusiastic user of Du Pont "Superior" 2.

"Superior" 2 is heartily approved by Hollywood's leading cinematographers. It's a superb panchromatic film that combines fine grain with speed and wide latitude. Du Pont "Superior" 2 is ideal for general studio interior and exterior work. For uniform high quality and excellent results with high- or low-key lighting, rely on this all-purpose negative rawstock. E. I. du Pont de Nemours & Co. (Inc.), Photo Products Dept., Wilmington 98, Delaware.

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Today's news tonight!

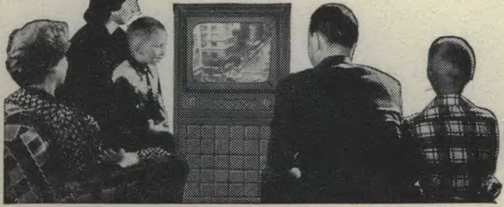
KTTV Staff Uses B&H Equipment To Make Deadlines

Station KTTV is attracting Los Angeles viewers with a daily "live" news reel. The popularity of this feature depends on getting on-the-spot movies of local events . . . editing and preparing them for showing the same evening . . . and making that showing a *finished* production.

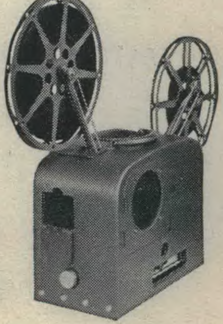
To do this successfully, day in and day out, requires highly competent staff teamwork, plus the finest equipment. The staff at KTTV who work with Bell & Howell camera, projector and editing equipment have found it perfect for the job!

Shooting a street scene with a Bell & Howell 16mm "70" Camera

KTTV News Unit at work in the Film Editing Room. Man in center splices film at B&H Film Editor



Single-Case Filmosound Projector. First choice of TV experts for previewing film before broadcasting . . . and for showing film to clients. Projects 16mm film—sound or silent. Complete film protection permits running originals or work prints without fear of damage. Change from forward to reverse or vice versa at flick of a switch—no rethreading necessary. Light, compact, easy to operate.



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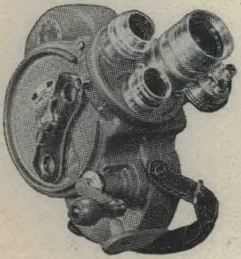

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Editorial and Business Office: 1782 N. Orange Dr., Hollywood 28, Calif.
Telephone: GRanite 2135

VOL. 32 NOVEMBER • 1951 NO. 11

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ON THE COVER

PRODUCER-PHOTOGRAPHER E. D. McGlone, of Cate & McGlone, Hollywood, lines up a shot depicting action in cockpit of a transcontinental sky cruiser for "United 6534," promotion film for United Air Lines photographed in 16mm Commercial Kodachrome. (See story on page 452.)

—United Air Lines Photo.

AMERICAN CINEMATOGRAPHER, established 1920, is published monthly by the A. S. C. Agency, Inc., 1782 N. Orange Dr., Hollywood 28, Calif. Entered as second class matter Nov. 18, 1937, at the postoffice at Los Angeles, Calif., under act of March 3, 1879. SUBSCRIPTIONS: United States and Pan-American Union, $3.00 per year; Canada, $3.00 per year; Foreign, $4.00. Single copies, 25 cents; back numbers, 30 cents; foreign single copies, 35 cents; back numbers, 40 cents. Advertising rates on application. Copyright 1951 by A. S. C. Agency, Inc.

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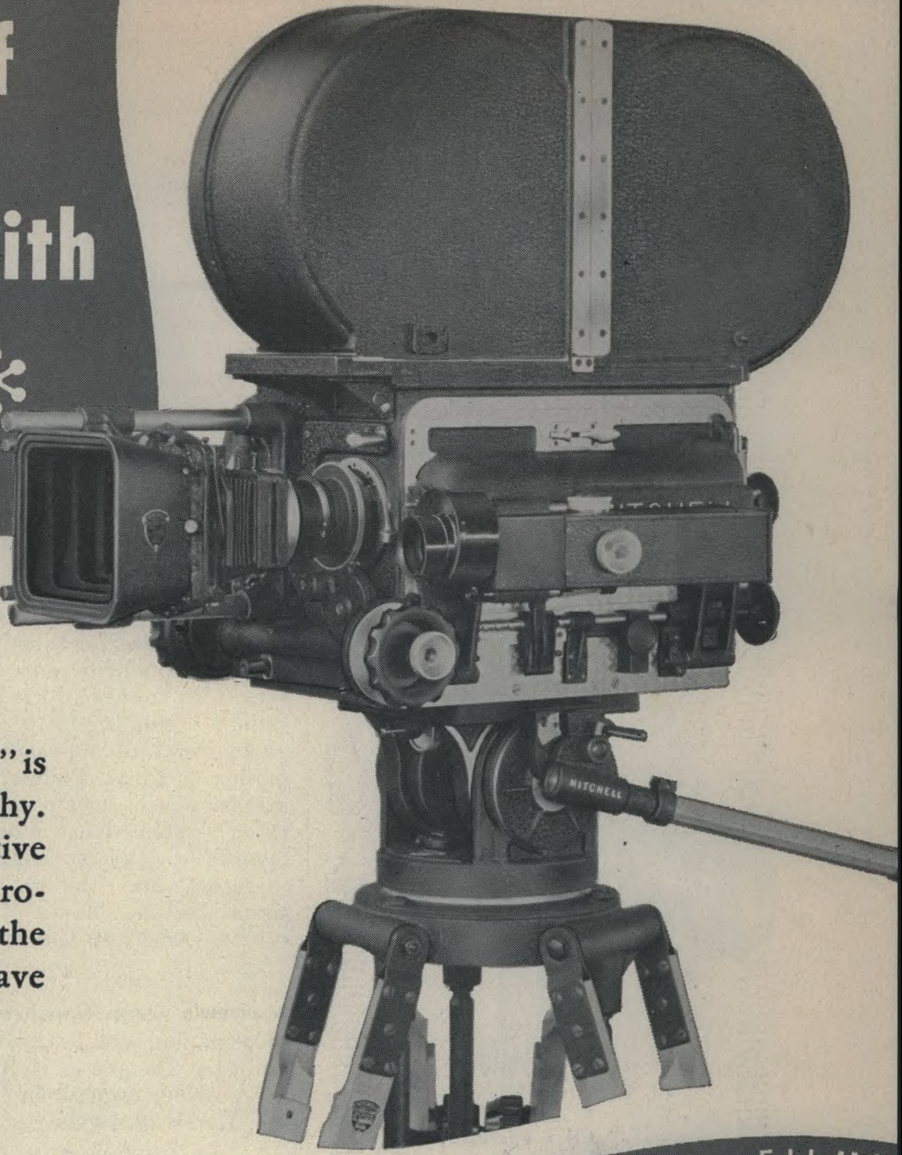

The MITCHELL STUDIO MODEL "BNC" is a truly silent camera for sound photography. No blimp is required. Its smooth, positive operation saves many costly hours of production time. Since the introduction of the "BNC," more and more major studios have made it standard equipment.

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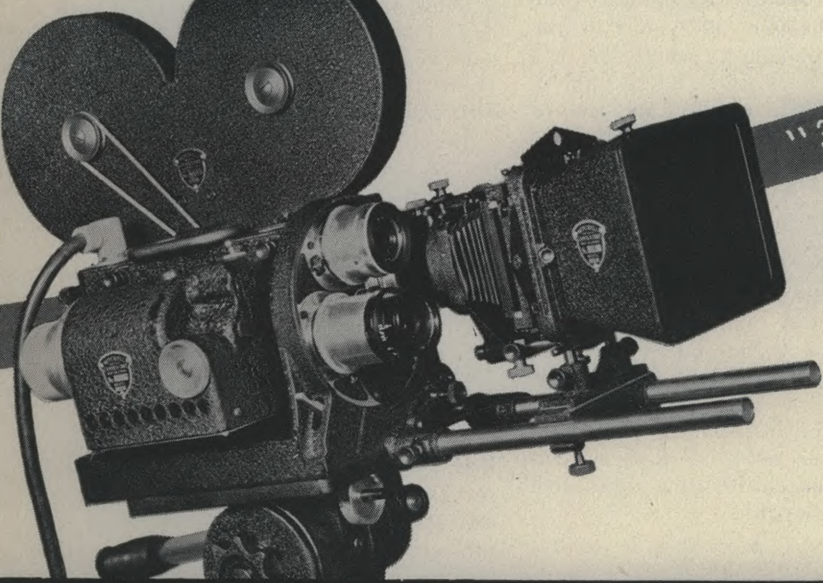

The MITCHELL "16" is enthusiastically acclaimed by leading commercial producers as the first professional camera to bring theatre-like quality to the 16 mm screen. Typically MITCHELL in design and workmanship, it contains the same proven features that made MITCHELL cameras famous throughout the world.

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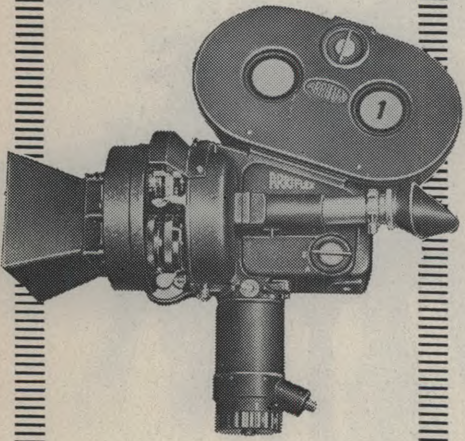

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Hollywood
Bulletin Board

November 2nd meeting of American Society of Cinematographers will feature a demonstration of the new 20th-Fox color filming system. The exclusive ASC showing of films will take place at the Grandeur Projection Room at the Fox Western Avenue studio, with Sol Halprin, studio's lab and camera department head, presiding.

●

The industry's top directors of photography are due for some important, nation-wide publicity during the coming year, with more than five national publications scheduling feature stories on the photography of outstanding Hollywood motion pictures. Popular Photography magazine will start series next month. Other publications already carrying monthly articles on Hollywood cinematography are Modern Photography, Home Movies, Movie Makers, and of course—American Cinematographer.

●

Academy's twenty-fourth annual Awards presentation will be held at the RKO Pantages Theatre in Hollywood, site of two previous awards, on Thursday evening, March 20, 1952.

●

Tom Tutwiler, A.S.C., planed out from Hollywood October 30 via Pan-Am. Airways for Bangkok, where he will direct the photography on first of several feature films to be produced there by Sathaporn Cinema Co., Ltd. Production is first to be made in Thailand with assistance of experienced Hollywood technical personnel. Robert G. North, currently in Thailand on assignment for 20th-Fox, will act as technical advisor. Tutwiler holds option for two additional pictures for company.

TUTWILER
Bangkok Bound

●

Wilson Leahy, A.S.C., has severed his connection with Acme Film Laboratories of Hollywood, and is now established in his own business, Associated Film Laboratories, at 5631 Hollywood Blvd. New company is specializing in color film printing, and will announce several new innovations in printing technique shortly.

PHIL ROSEN

Phil Rosen, 63, veteran film director and former cinematographer, died in Hollywood October 22. He started in the industry as a cameraman in 1912. Rosen was a charter member of the American Society of Cinematographers and its first president. He also was active in forming the Screen Directors Guild. Funeral services were held October 24 at Hollywood Cemetery Chapel. Among ASC members named as honorary pall bearers were Fred W. Jackman, Homer A. Scott, Charles Rosher, Victor Milner, Arthur Edeson and Guy Wilky.

Rosen was engaged in making films for television at the time of his death. Two sisters survive.

●

Ed. B. DuPar, A.S.C., has finished shooting *The Lion And The Horse* at Warner Brothers, second feature to be made by the company with its new color filming system. Picture was shot mostly at Kanab, Utah.

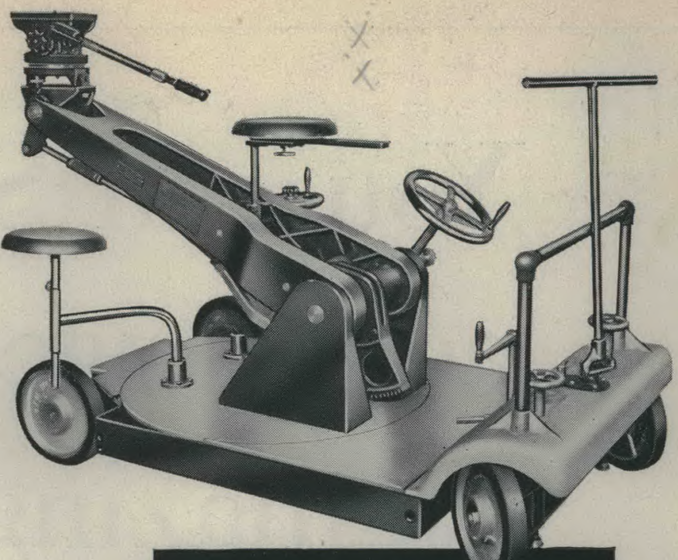
●

Karl Freund, A.S.C., is being acclaimed for his TV film photography, following telecasting of the first three films in the series, *I Love Lucy*, starring Lucille Ball and hubby Desi Arnaz.

●

Paramount Studio will shortly announce a complete new system for dubbing foreign versions of Hollywood films. System will employ dual sound tracks on release prints: (1) optical—carrying the music score, and (2) magnetic

(*Continued on Page 478*)



HOUSTON-FEARLESS PANORAM DOLLY... This versatile piece of equipment provides the cameraman with complete mobility and adjustment of camera angles. Leveling head, upon which friction or geared head is mounted, can be quickly, smoothly raised from 14" to 70" high, remaining level at all times. Entire cantilever arm revolves easily on turret base fast or slowly. Dolly rolls smoothly, quietly, turns on its own axis or can be moved sideways. Very maneuverable in tight places. Steel and aluminum construction provides maximum strength and minimum weight. Top quality throughout. Developed and improved during many years use by leading Hollywood Studios.

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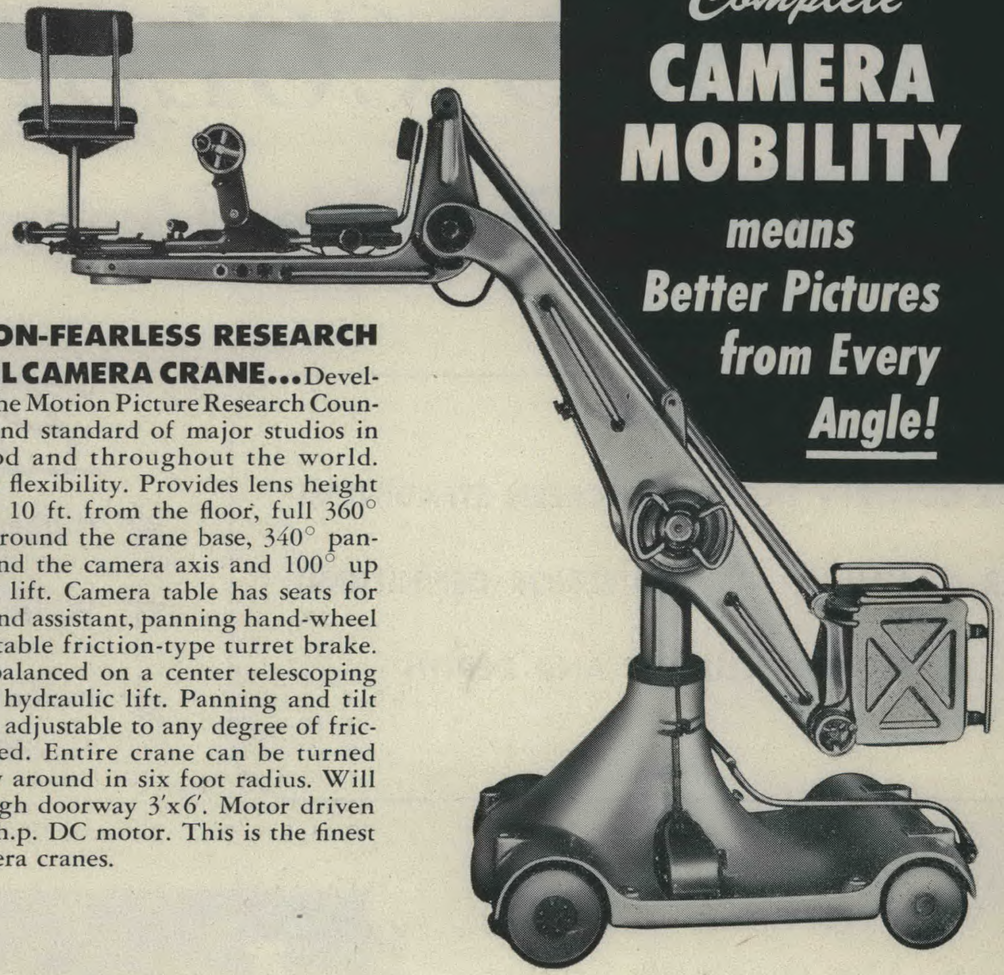

HOUSTON-FEARLESS RESEARCH COUNCIL CAMERA CRANE... Developed for the Motion Picture Research Council, Inc., and standard of major studios in Hollywood and throughout the world. Maximum flexibility. Provides lens height from 2 to 10 ft. from the floor, full 360° panning around the crane base, 340° panning around the camera axis and 100° up and down lift. Camera table has seats for operator and assistant, panning hand-wheel and adjustable friction-type turret brake. Boom is balanced on a center telescoping post with hydraulic lift. Panning and tilt brakes are adjustable to any degree of friction desired. Entire crane can be turned completely around in six foot radius. Will pass through doorway 3'x6'. Motor driven by new 5 h.p. DC motor. This is the finest of all camera cranes.

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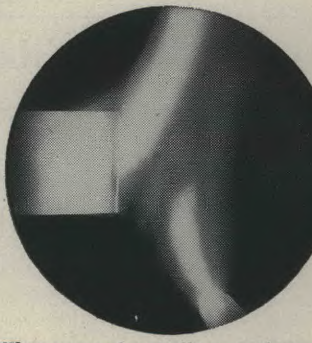

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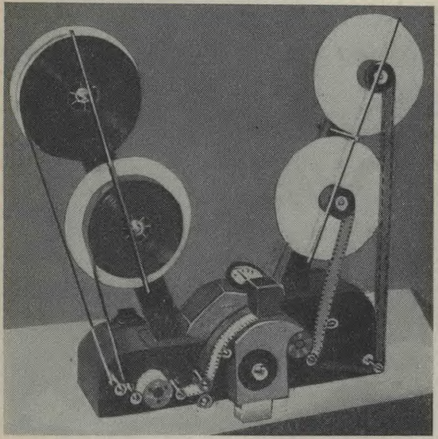

The MICOP PRO Continuous Printer is built on professional standards to make good, sharp prints, picture only, sound only or composite. Diaphragm allows ten densities for color work. Not an amateur's toy, but a real laboratory instrument. 16mm or 35mm models available.

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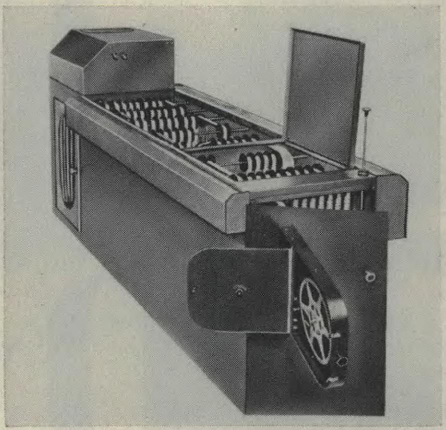
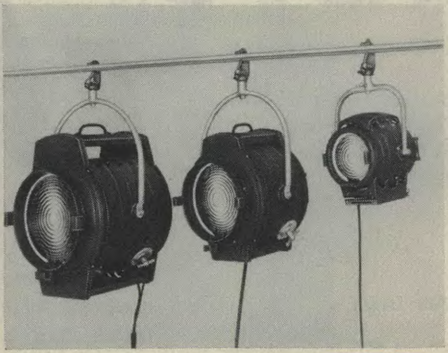
WHAT'S NEW

in equipment, accessories, service

TV FILM DEVELOPER—S.O.S. Cinema Supply Corp., 602 W. 52nd St., N. Y. City, announces the Bridgamatic TV Special automatic 16mm reversal processing machine. Slightly less than 8-ft. long, 3-ft. wide and 2-ft. high, unit contains 9 stainless steel tanks, feed-in elevator with rising indicator, daylight magazine with unique swinging door, and spraybar in final wash tank. Unit automatically develops and dries fast process film, such as Du Pont No. 330, at 720 ft. per hour; negative at 800 ft. per hour; and soundtrack at 250 ft. per hour. Price is $2,995.00, plus tax.



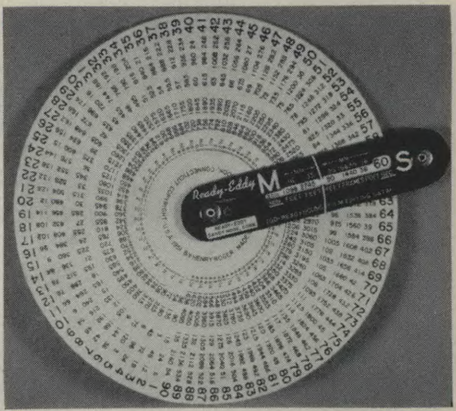
TV LIGHTS—Bardwell & McAlister, Inc., 2950 Ontario St., Burbank, Calif., announce a group of 3 new lights for TV set lighting. Illustrated are the "5000," "1000/2000," and the "500/750." With proper grouping of the three models, effective lighting may be achieved for any TV setting, according to the manufacturer. Data and prices on complete line may be had by addressing company direct.



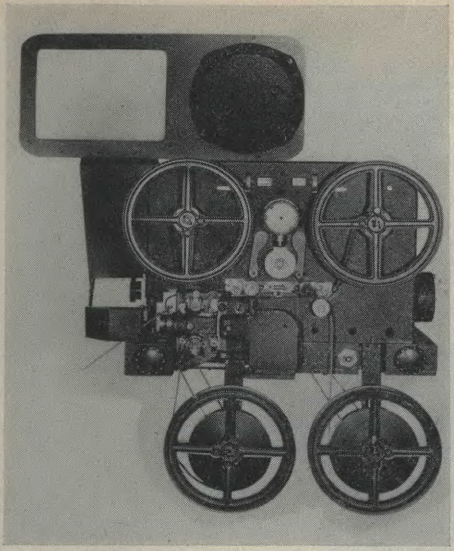
VACUUMATE INSTALLATION—Color Service Company Laboratory, 115 West 45th St., New York City, announce the installation of equipment for rendering Vacuumate film protection service gratis to its clients. Company is said to be first laboratory in New York offering this service.

U. S. AGENTS FOR CTM PRODUCTS—Florman & Babb, 723 Seventh Ave., N. Y. City, have been appointed exclusive U. S. distributors of the products of CTM (Cinema Tirage Maurice) of Paris, France. Products include the Morigraf 35mm camera, a lightweight, triple-extension tripod, 35mm and 16mm "hot" splicers, editing machines, a 4-gang synchronizer, film cleaning and waxing machines, film counters and rewinds. Products are now on display at Florman & Babb showrooms. Descriptive literature and prices available on request.

FILM EDITING DATA CHART—"Ready-Eddy" is a new computer affording quick answers to 1001 sound film editing questions. Computer contains three scales on one side which give data on number of feet, number of seconds and frames of 35mm film, and ditto for 16mm film. Two scales on reverse side give data on three additional film measuring and timing divisions. Made of durable plastic, "Ready-Eddy" fits coat pocket or purse. Price is $2.00. Carrying case is 50c extra. Manufacturer is Ready-Eddy, Sandy Hook, Connecticut.

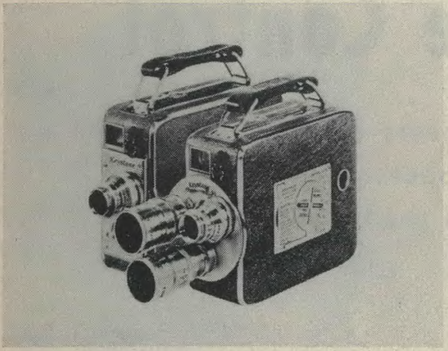


DOUBLE SYSTEM EDITOR—M. W. Palmer, 468 Riverside Dr., New York 27, N. Y., announces a new 16mm double system editing machine for editing picture film and sound track. Designed for needs of professional 16mm film maker, editor has 2 separate film channels for



sound and picture. Either film can be handled independently, or together in synchronism. Separate frame and footage counters are provided and the machine can also be furnished with magnetic pickup for 16mm magnetic film, if desired. A foot pedal control is provided and also a reverse switch for operation of editor in either direction.

TURRETS FOR KEYSTONE—Owners of Keystone "K-40" and "Riviera" model cine cameras now may have them modernized with addition of a 3-lens turret for $25.00. Built-in wide-angle view-



finders will be installed on older models for an additional charge of $8.50. Cameras should be sent direct to Keystone Manufacturing Co., 151 Hallet St., Boston 24, Mass.

MUSIC ON TAPE—First large scale production of musical "records" on magnetic tape is announced by A-V Tape Libraries, Inc., 730 5th Ave., N. Y. City. Catalog just issued lists 14 reels of tape which contains approximately 150 separate music titles, from western square-dance through light dansant, organ and the classics. Reels are available for either 7.5" or 3.75" per second tape speeds. All music, which was specially recorded for the reels, is fully copy righted.

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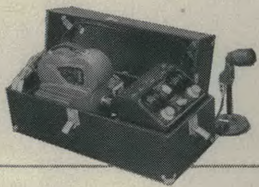

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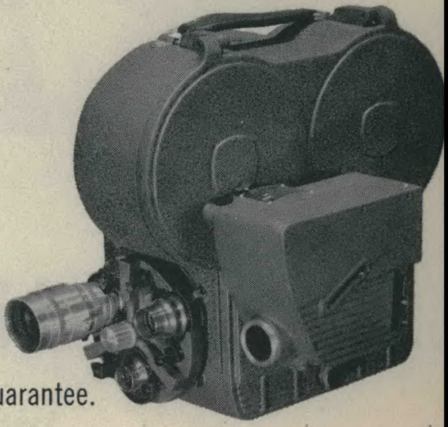

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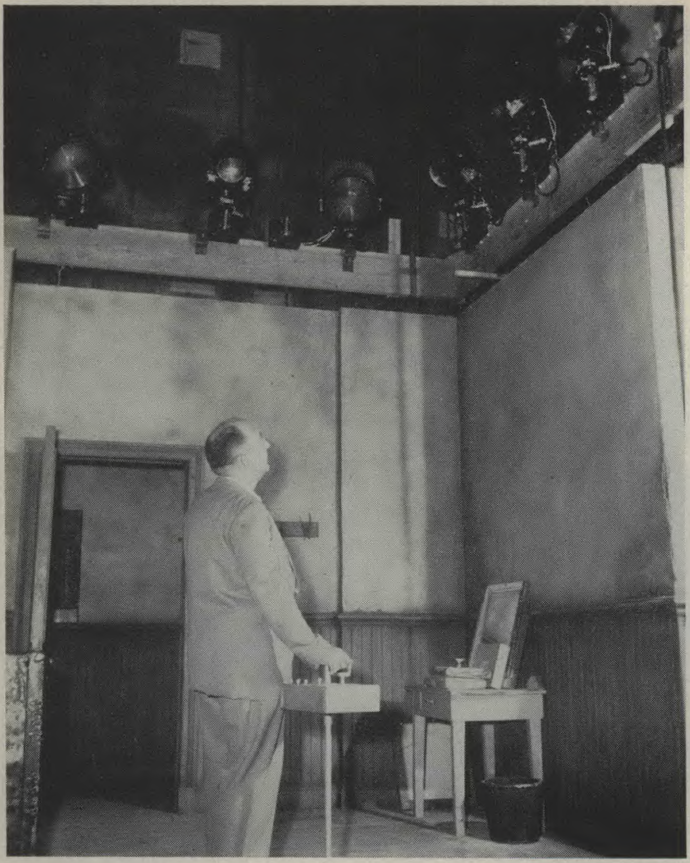
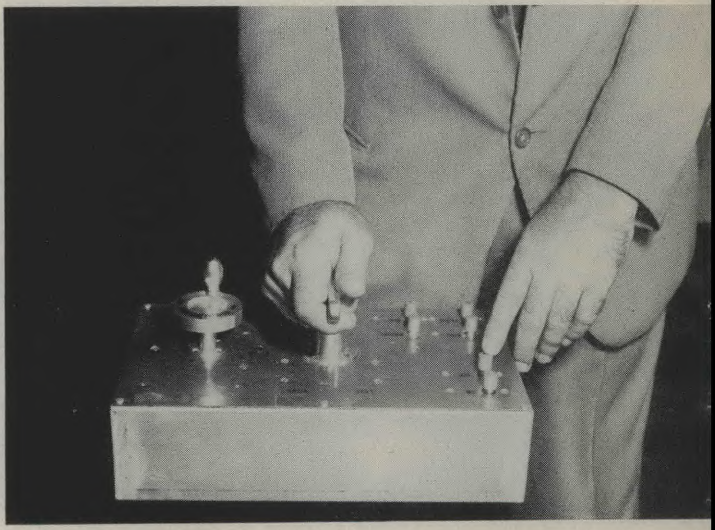


FIG. 1—A typical installation of remote-control overhead lamp system was demonstrated on this exhibit set at Paramount Studio to members of the A.S.C. Engineer Charles Hisserich shows how lamps are positioned and lit by turning dials and pushing buttons on system's remote control panel.

FIG. 2—Closeup view of Master Control panel. Rotating dial at left pre-sets lamps or selected lamp groups. "Wobble-bar" control in center tilts lamps when operated up and down, pans them when turned left or right. Push buttons turn lamps on or off after pre-set by lamp selector dial.



Set Lighting By Remote Control

System developed by Paramount Studio Engineers affords wider control of lighting by the director of photography; promises substantial economies by speeding up production.

By ARTHUR ROWAN

PARAMOUNT STUDIO's engineering department in collaboration with some of Hollywood's best cinematographers, has developed a remote control incandescent lighting system which offers a quick method for automatically adjusting overhead set lamps, speeding up light changes, and otherwise shortening the time required for lighting studio sets. The complex lighting problems faced by director of photography George Barnes, A.S.C., in undertaking the photography of Paramount's *Greatest Show On Earth*, gave impetus to early development of the new system.

Briefly the system consists of (1) a number of lightweight set lighting units especially designed for the system; (2) a control unit or "bail" for each lamp that, when actuated by remote control, automatically tilts the lamp, pans it, and adjusts the lamp beam from spot to full flood or to any point in between; and (3) a remote master control by which the lamps in the system may be selectively controlled individually or in groups — making it unnecessary for the gaffer to remain overhead to make these adjustments manually from the scaffolding. Actually, in most setups where this lighting system is used in the studio, scaffolding is no longer necessary.

The system had its beginning in the unusual requirements for lighting the vast circus tent interiors for *Greatest Show On Earth*. Because laws prohibit use inside circus tents of any open flame type of lamp, including arcs, this made it necessary to use incandescent lamps entirely for illumination. Fortunately, the timely development of Technicolor Corporation's new low-level color film made this decision practicable.

The studio was therefore faced with the problem of installing some fifty 5-KW lamps inside the circus tent in such a manner that there would be no interference with the acts or with the rigging of the tent. As no parallels or platforms for the lamp operators could be used, and as the rigging of all lamps would have to be prepared on the ground and then hoisted into place, it became obvious that some means of remote control for the lamps would have to be worked out; also, that the lamps would have to be considerably lighter in weight than those which are normally used for studio set lighting.

The fifty 5-KW lamps ultimately developed for the circus picture featured a complete new design, which resulted in a remote control lamp and bail having a combined weight of only 32 pounds. (The average 5-KW lamp in use today alone weighs between 60 and 80 pounds.) In addition, the remote control afforded George Barnes and his crew direct control from the circus floor of every set lighting unit.

Successful operation of the lamps on the circus picture created considerable interest by the Paramount studio management on possible applications for general studio set lighting.

In discussing the factors influencing the development of these lamps, Loren L. Ryder, Director of Engineering at Paramount, said it should be kept in mind that the first group of fifty lamps was primarily developed to do a special job which could not be done by any other means. Therefore, in considering the application of the system to studio set lighting, it must be recognized that the lamps and the method of remote control used in the circus tent interiors is not ideal for studio set lighting. The circus lighting job, Ryder explained, was set up to provide clusters of four lamps on each of the twelve quarterpoles surrounding the circus rings, and remote control facilities for these groups were extended to points immediately adjacent to the base of these poles.

As the circus tent was over 400 feet long, it was found advisable to use multiple control stations and to disperse the control centers so that each one handled the lighting for one of the three circus rings. As a result, the original installation provided a safe margin of flexibility to allow the control centers to be moved to the most desirable position for shooting. Separate cables were run from each control center to each lamp, a fact which entailed extensive rigging. Such a layout, of course, required some modification for studio use, and this was accomplished in adapting it to the shooting of interiors on the sound stage for the circus picture, and also the interiors for *Somebody Loves Me*, which George Barnes subsequently photographed.

For studio set lighting, the lamps are arranged on parallels or on the edge of the set in a continuous "line" distribution, rather than in separate clusters, as in the circus picture.

The application of the remote control equipment to studio use allows simplification to be made in the power sources used to energize the lamp actuators. For the circus job, these power sources consisted of separate portable boxes containing 24 volts of dry cell batteries, each box controlling one 4-lamp group. This method of energizing was chosen primarily because of the fact the company did not wish to tie into the circus lighting system and possibly choose an outlet which would not be under the camera crew's control.

In setting up the remote control system at the studio, it is of course possible to energize the actuators from a power supply tied in to the stage wiring. The choice of 24-volt power supply was predicated upon the demand that no element in the control system provide operator hazard.

The remote control, lightweight lighting equipment presently in use at Paramount West Coast Studio consists of most of the equipment used on the circus picture plus some new equipment specifically designed for studio set lighting.

The system, as presently used on the sound stage, consists of a Master Control, shown in Figs. 1 and 2; Power Supply unit (Fig. 3); Group Control Panel (Fig. 3); and the light units with their respective motorized bail and control box, as pictured in Fig. 4.

The Master Control, which is operated from any floor position on the stage, affords remote pushbutton control of (1) lighting the lamps, (2) panning and tilting them to any desired position within a 180° arc; and (3) altering the lamp beam from spot to full flood or to any intermediate position.

An important consideration was designing a new lamp especially for this system that would be considerably lighter in weight than the conventional incandescent lamp units. At present

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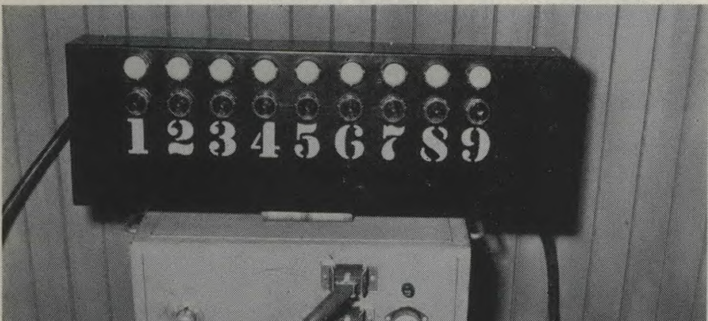

FIG. 3—Two important units in the remote control system: the Group Control Panel (top) which provides automatic on-off control of lamps individually or in groups; and (below) the power supply unit. The two were combined here for convenience of photographer, only. Normally, Group Control Panel is mounted on lamp parallel.

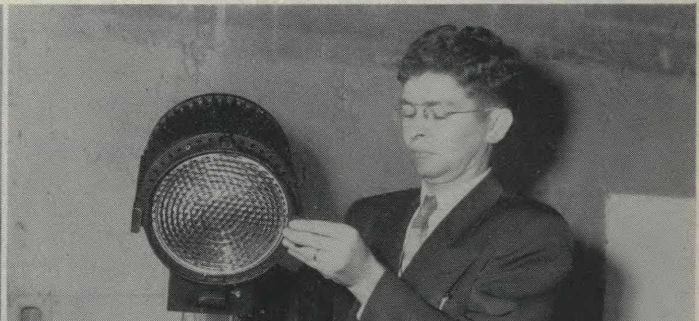

FIG. 4—Engineer Robert Devinney shows how lamp fits in motorized bail, which is immediately below lamp and fitted to control box (4). Motor (1) controls tilting of lamp; motor (2) the beam spread; and motor (3) rotation of lamp in 180° arc. When three-piece unit is mounted above set, its entire operation is controlled from floor.

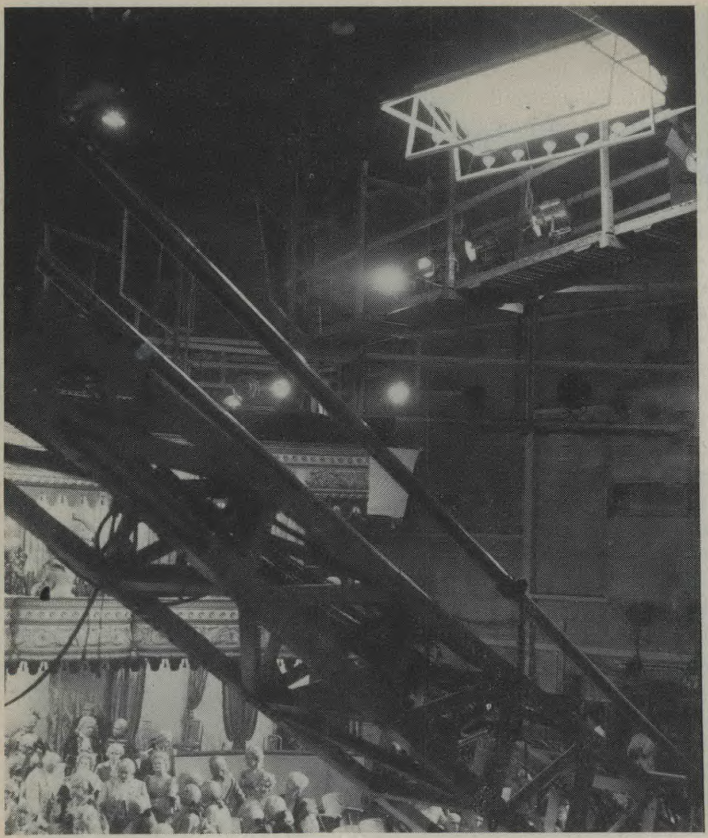

FIG. 1—Giant reflected light unit was used in illuminating the large theatre interior set for MGM's "Scaramouche." Besides improving quality of light, unit is cheaper to operate, less costly to rig than heavier single-lamp units.

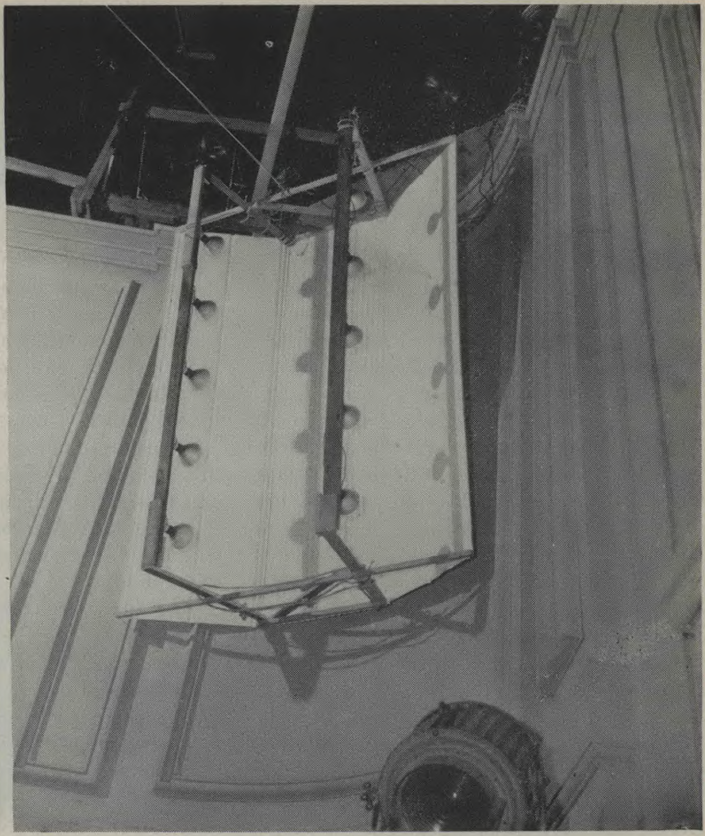

FIG. 2—Closeup of "Skylite" unit (unlit) shown at left. Here it is used to illuminate huge stair well for MGM's "Lovely To Look At." Simply-made of three panels of corrugated aluminum painted flat white, two rows of R2 photolamps furnish light source.

Reflected Light For Color Photography

New type lighting units developed at MGM give "north light" quality to set illumination.

By LEIGH ALLEN

THE INCREASING use of color film in motion pictures has stimulated considerably research aimed at developing a light source for color photography having softer quality than presently obtainable from existing studio equipment. Among the more technically-minded cameramen are many who, remembering the peculiar diffused quality of the north light used so effectively by old-time portrait photographers, have searched for a practical means of obtaining lighting of similar quality for studio sets.

The search for a "softer" light source has progressed with considerable success at Metro-Goldwyn-Mayer Studio, one of the greatest single producers of feature films in color. Here, under the supervision of John Arnold, A.S.C., the studio's executive director of photography, several prototype lighting units have been developed based on the principle of reflected light. The units have been given exhaustive tests in the photography of several recent MGM color productions.

From the numerous tests conducted by Arnold in the studio's camera department and on the sound stage, it was found that reflected incandescent light more closely approximates the quality of the north light of the portrait photographer.

The direct illumination from a bare incandescent lamp in a conventional lamphouse usually has a strong straight-line beam characteristic, with no ability to "curve" or disperse light around a three-dimensional object. Even when

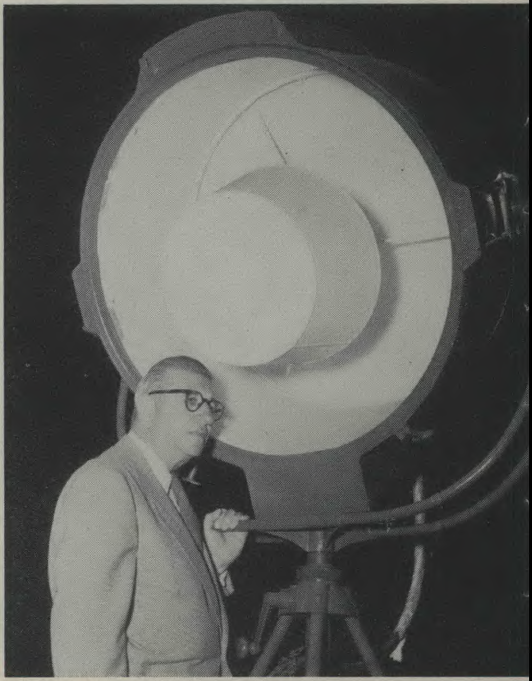

FIG 3 — John Arnold, A.S.C., stands beside giant 5000-W floodlamp, one of new series of reflected light units he developed for MGM.

diffusion screens are placed in front of such lamps, the straight-line characteristic cannot be diffused or broken up sufficiently to produce the quality of soft light necessary to give the wide range of gradation in shadows possessed by a light source with "north light" characteristics.

In pursuing his research in reflected light, Arnold found that by directing a light source back into the lamphouse reflector and thence toward the set, a change in the light beam characteristics takes place. The light becomes almost "shadowless" and regardless of the distance of lamp to subject, it will not create sharp shadow definition. Player's faces are rendered softer—the light apparently "reaching around" them to effect a degree of modeling which was the hallmark of expert portrait photographers in the days of the studio north light.

A standard 2000-watt MGM floor lamp was the first to be converted to the new reflected light principle (Fig. 5). The front or primary reflector was made of sheet aluminum in the shape of a flat-bottomed pan, and mounted directly in front of the lamp — its sides blocking and at the same time reflecting side rays from the lamp. Mounting of the reflector was hinged, so that it could be quickly removed for replacement of bulb, as shown in Fig 6. Interiors of both the lamphouse and the primary reflector were painted flat white. The paint is a special formula developed after considerable research to find a surfacing material with the right reflective qualities and having no tendency to alter color temperature of light from CP globes.

Following tests to determine the lamp's ability to hold color temperature to normal, it was then moved to the test stage where it was subjected to photographic use with both black-and-white and color films. Results were highly promising. George Folsey, A.S.C., long a believer in the value of reflected light for set illumination, used the lamp in photographing many of the scenes for *The Law And The Lady*, starring Greer Garson.

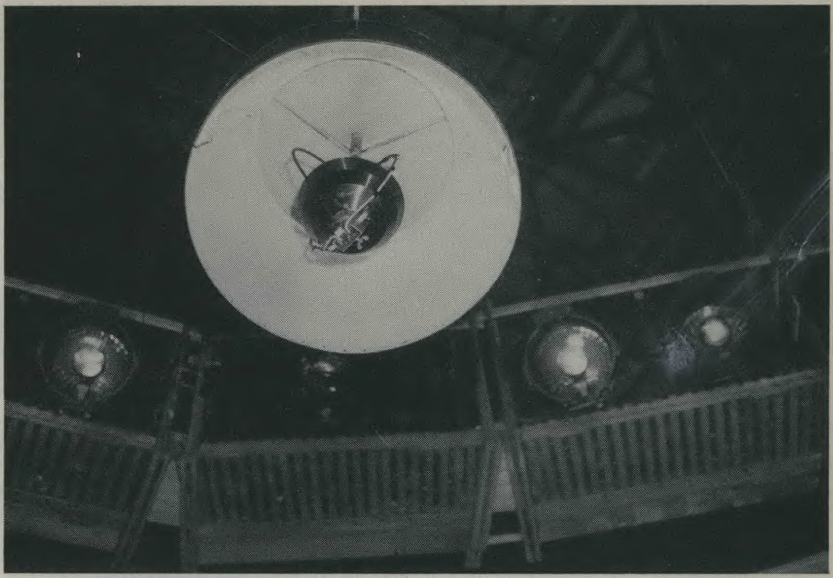

FIG. 4—Dome-type 5000-W reflected light floodlamp has three-tier ring-type primary reflector unit in center. Photo shows lamp integrated with other types of set lighting equipment on set for "Lovely To Look At."

Meanwhile, additional units of increased size — some of different design — were being completed by the studio. The first, pictured in Fig. 3, was a 36-inch floodlamp using three 2000-watt CP lamps behind a reflector pan similar in design to that used in the first lamp.

A 5000-watt dome light (Fig. 4) was next completed. This lamp was designed for lighting large indoor sets from a high position overhead. George Folsey used this lamp in lighting many of the sets for MGM's *Rain, Rain Go Away*, as yet unreleased.

The aim now was to design (or to provide by re-design and reconstruction) a complete range of reflected light units for integration with other set lighting equipment. As each new lamp proved its worth, the program progressed to other lamp types. Interesting is a complete new application in what Arnold terms the "picture frame" lamp, which is similar to a standard side-lamp. Rectangular in shape, the body, except for the top and bottom, is a single piece of sheet metal curved slightly in an arc, then curved in sharply at either end toward the inside to form the reflectors for the two No. 2 photo-

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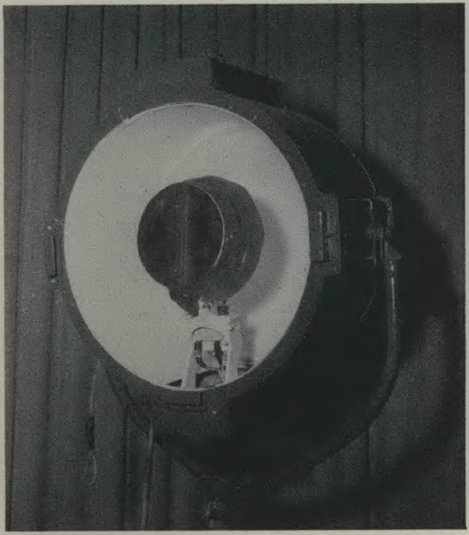


FIG. 5—Initial model of reflected light unit developed by Arnold and used in actual production. Primary reflector "pan" in center has louvers in sides for heat dispersion.

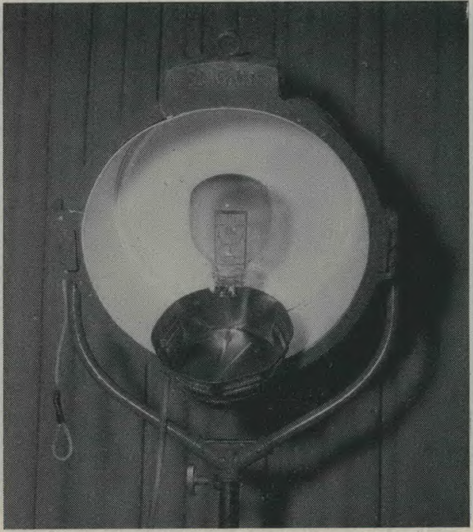


FIG. 6—View of same unit showing the primary reflector opened for easy access to 2000-W CP globe. Unit is 18" in diameter.

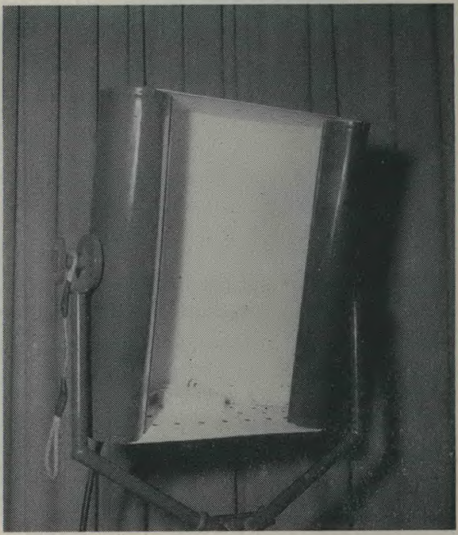
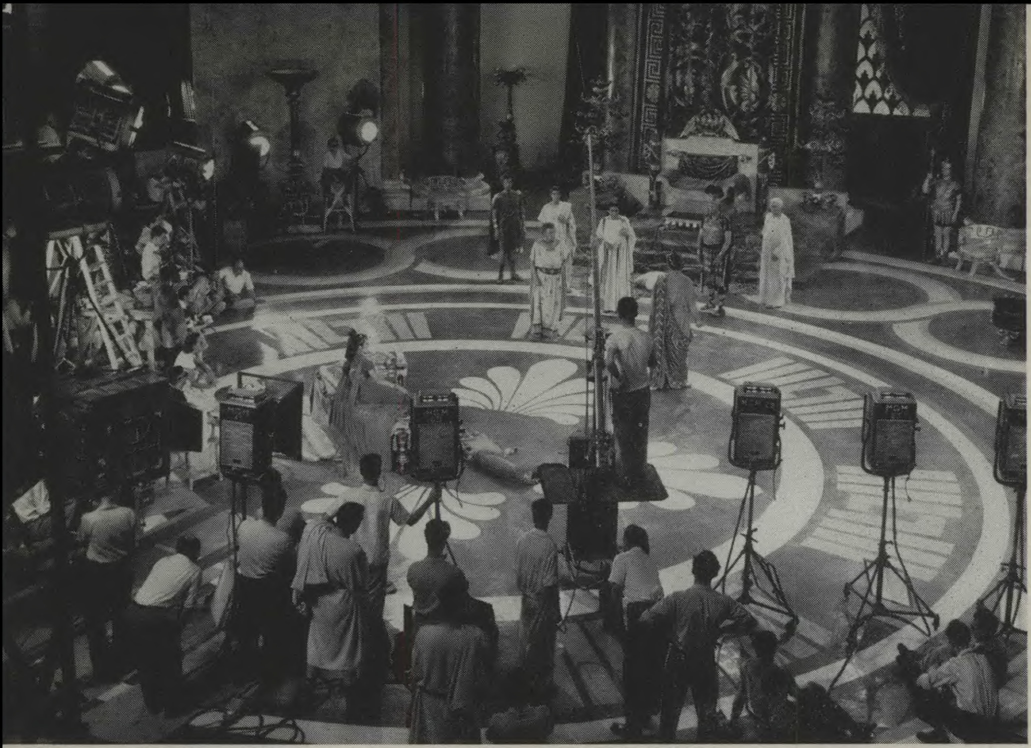


FIG. 7—Side-lamp model reflected light unit which has four No. 2 photofloods concealed in curved reflectors at either side.



LOOKING DOWN on the big set of Emperor Nero's throne room for MGM's "Quo Vadis," filmed in Technicolor in Italy. Unusual overall lighting of the scene was achieved through use of huge diffusion silks and arc light high above the set.

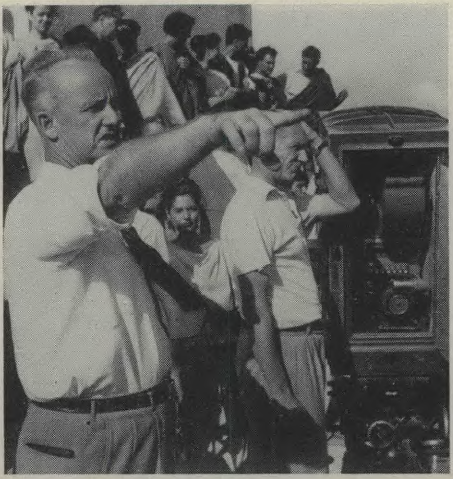
Filming "Quo Vadis" In Italy

—PART TWO—

By ROBERT L. SURTEES, A.S.C.

LAST MONTH I described here some of the interesting experiences and also some of the major photographic problems encountered in making *Quo Vadis* in Rome. No one before ever had made a Technicolor feature production in Italy. Italian studios and sources of equipment therefore were unable to supply many of our needs. And so it was that before we could begin shooting, camera parallels had to be built, as did camera perambulators and tracks, reflectors (for which we had to send back to Hollywood for the silver leaf!) overhead scrims, etc. A "Council" camera crane and also a large boom, secured in New York, had arrived in bad shape due to a rough oversea crossing.

The technical help problem proved to be a major headache, too. One thing I have found to be true, as a result of my experiences in making pictures in foreign countries, and that is: one American crew member is worth more to a production than all the inexperienced help recruited in the country where the picture is made. This is in no sense belittling the fine Italian, German, Arab and African men who have worked with me during the production of U. S. pictures made in their respective countries. It is only that these men have not had the same kind of training as our American technicians and therefore do not adapt themselves to our pace. That some of these foreign motion picture technicians are catching on was evident when I returned to Italy several months later to photograph *The Light Touch,* also for MGM. I found the same Italian crew I had used on *Quo Vadis* a much improved outfit.



THE FIRST few days of shooting "Quo Vadis" were hectic; camera motors blew, sound systems went out, and progress was limited to but three or four setups each day. Here, disturbed but not discouraged, Bob Surtees directs a change in reflector position on an outdoor set at Cinecitta studio in Rome.

Adapting the Italian worker to our methods and integrating him with our own studio-trained men was greatly a matter of education. That became evident before we had progressed many days in the shooting of *Quo Vadis.* One of the first steps taken in this direction was our school for electricians conducted in Rome by Fenton Hamilton, my gaffer, and his assistant Frank Leonetti. Prior to our arrival in Rome, there had been only three arc lights in the entire Italian film industry, which explains why competent Italian operators of this type of equipment just weren't to be found.

In addition to the large amount of lighting equipment MGM had shipped to Italy, the studio also sent over five large generators. Later we found it necessary to borrow an additional generator from the Italian government — one that had been removed from the decommissioned battleship "Vittoria Veneto"!

In the 250 tons of electrical equipment shipped to Italy from the U. S. were a score of "brutes," one hundred and fifty seniors, and many other miscellaneous lamps—all equipped with the necessary cables, splicing boxes, etc. When all this was dumped on the Cinecitta lot, the Italian workers were completely amazed.

Cinecitta had previously been stripped clean of all electrical equipment—even to the wiring — by the German army, which accounts for the necessity of having to ship so much from America. On arrival, we found much of the U. S. equipment badly in need of repair, so roughly had it been handled on the ship, and in loading and unloading. But Hamilton and Leonetti soon had their students sufficiently organized and advanced in their training to tackle the job of getting the equipment in shape and the studio in order for its use.

The first few days of production in Rome were "rough." We were able to secure only three or four setups per day. Camera motors broke down; sound equipment blew; the Italian electricians, new to their jobs, allowed lamps to go out during takes. One tried trimming an arc lamp with the switch on! The shock he received taught his associates a lesson as well. Since the generators did not have voltage regulators, and thus had to be controlled manually, we ran into voltage fluctua-

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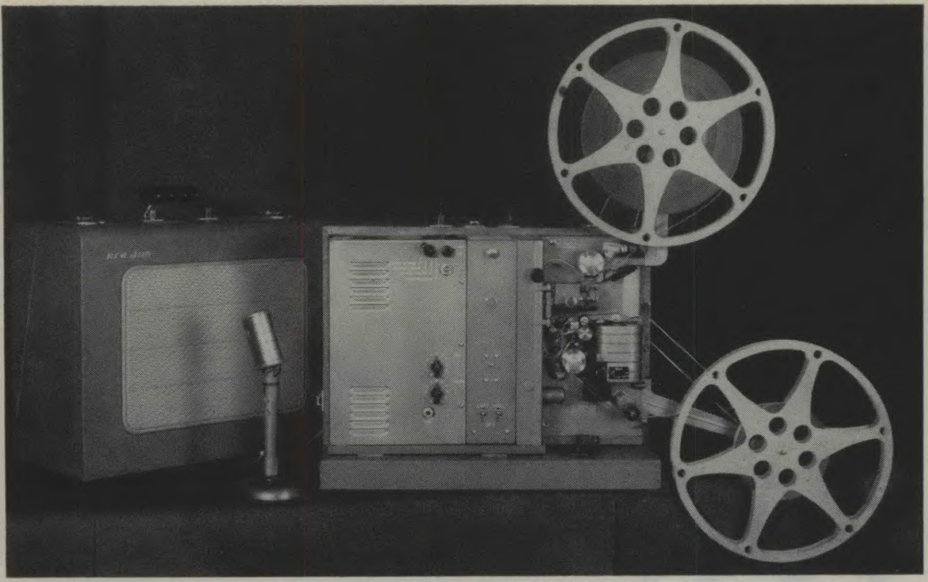

FIG. 1—The new RCA "400" combination magnetic recorder-projector makes possible the recording of sound on processed 16mm films, without studio facilities. It also projects sound films having optical tracks. Machine opens up wide possibilities for non-professional sound film makers.

Dual-purpose Projector

New projector-recorder provides first commercially available means of magnetically recording sound on processed 16mm motion picture film.

By RALPH LAWTON

EVER SINCE magnetic sound recording was introduced as a means of providing sound tracks for motion picture films, non-professional movie makers and others have looked forward to—and indeed have been promised—a simple application of magnetic recording to processed motion picture films. The movie amateur particularly has anticipated a simple magnetic recording-playback device which would enable him to record sound magnetically on his home movie films and to be able to play this sound through his projector.

While such a device as a separate auxiliary unit or accessory is not yet available, the first step in that direction has been accomplished in the development by Radio Corporation of America of the new RCA "400" projector-recorder. This machine in the hands of any capable operator may be used for recording sound tracks on processed 16mm motion picture films, and for playing the sound back on the same machine along with projection of the picture. Not only will amateur movie makers find interest in this equipment, but it opens new avenues of simplified sound film production for industry and education — particularly for organizations requiring simple, low-cost sound films in limited print quantities. An industrial training film, for example, can be produced by the firm itself, and sound in the form of narration can be added by magnetic recording following completion of the film. Often only one or two prints of this type film are required, and this new low-cost method of providing a sound track will find immediate favor.

Delay in the development of a suitable combination projector-magnetic recorder has been due to problems encountered in developing an acceptable method of edge-coating motion picture film to provide the sound track. The first successful edge-coated sound film was demonstrated by Marvin Camras, of Armour Research Foundation, in 1947. Reeves Soundcraft Corp., late last year, demonstrated on the first experimental RCA 16mm projector-recorder the first successful production of edge-

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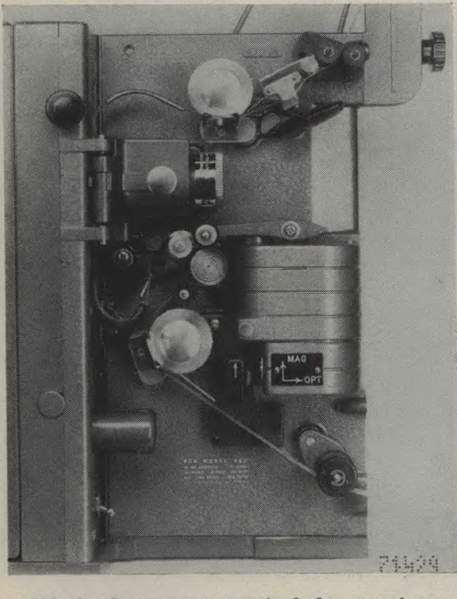

FIG. 2—Components required for sound recording and playback have not altered simplicity of machine's threading. Erase head is at right of top sprocket.

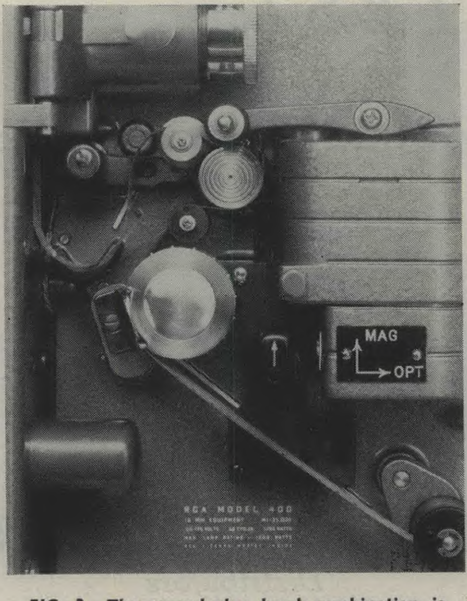

FIG. 3—The record-play head combination is encased inside sound drum, just above drive sprocket (center). Thus, film path remains same for either type track.

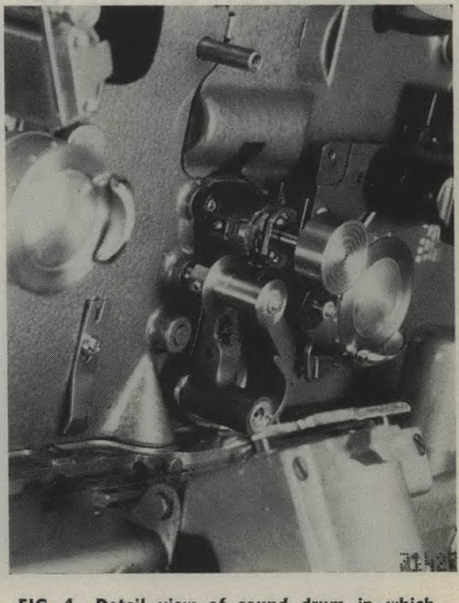

FIG. 4—Detail view of sound drum in which is located the record-play head. This location permits standard 26-frame spacing from sound to picture.

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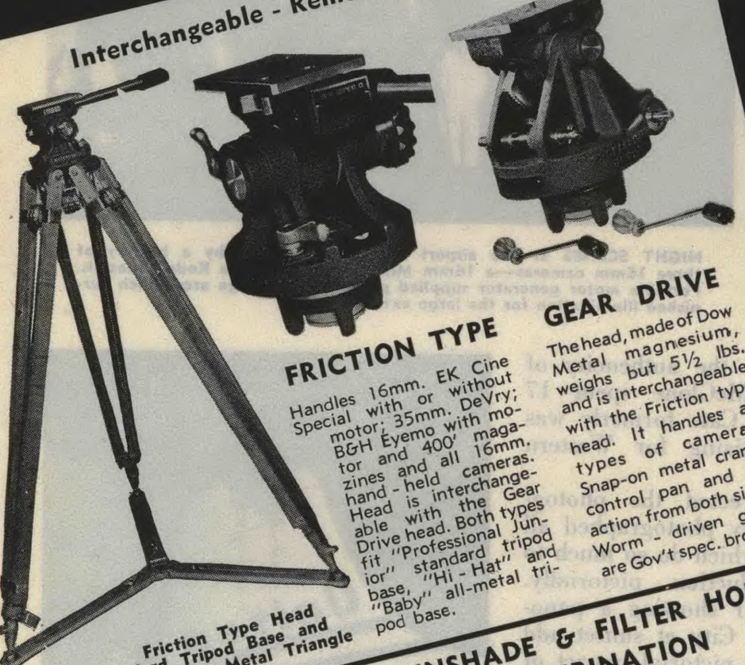


Friction Type Head on Standard Tripod Base and Collapsible Adjustable Metal Triangle

FRICTION TYPE

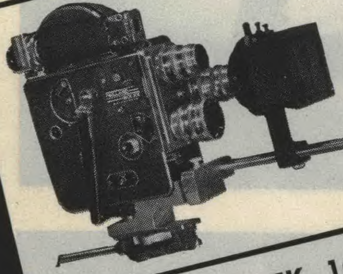
Handles 16mm. EK Cine Special with or without motor; 35mm. DeVry; B&H Eyemo with motor and 400' magazines and all 16mm. hand-held cameras. Head is interchangeable with the Gear Drive head. Both types fit "Professional Junior" standard tripod base, "Hi-Hat" and "Baby" all-metal tripod base.

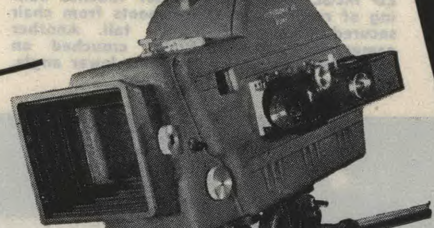
GEAR DRIVE

The head, made of Dow Metal magnesium, weighs but 5½ lbs. and is interchangeable with the Friction type head. It handles all types of cameras. Snap-on metal cranks control pan and tilt action from both sides. Worm-driven gears are Gov't spec. bronze.

SUNSHADE & FILTER HOLDER COMBINATION

For use with Bolex and Cine Special 16mm. cameras. Holds two 2" sq. glass filters and 2½" round Pola Screen with handle which can be rotated for polarization. Covers all lenses from 15mm. to 6" telephoto and eliminates need for various filters. Precision made of the finest materials. Compact, simple to assemble and dismount. May be permanently affixed to camera or quickly detached.



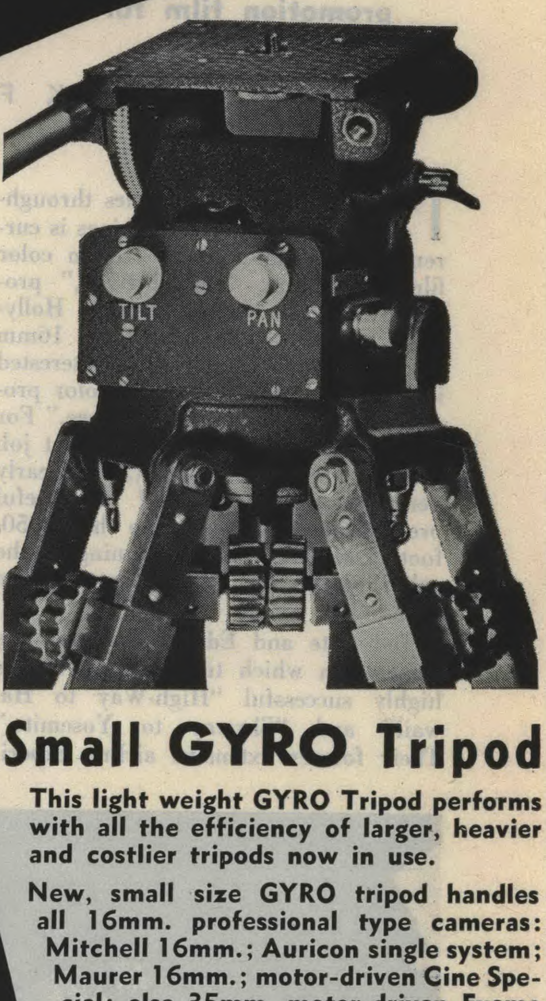


BLIMP for EK 16mm. CINE SPECIAL

This Blimp constructed of Dow Metal magnesium, is thoroughly insulated to afford absolute silent operation. Exclusive features: Follow focus mechanism permits change of lens focus while camera is operating in blimp. Blimp takes synchronous motor drive, which couples to camera. A dovetail bracket is provided to mount an erect image viewfinder.

SYNCHRONOUS MOTOR DRIVE
110 Volt A. C., Single Phase, 60 Cycle

This motor will run in synchronization with either 16mm. or 35mm. sound recorders. It is provided with mounting platform which permits removal of magazine while camera remains mounted on motor. Drive coupling attaches to single-frame shaft of camera and is mated to spring-steel drive arm of motor gear box. This assures that camera mechanism cannot be damaged if a film jam occurs as the spring steel arm drive will shear. This is easily replaced. A knurled knob on motor armature permits rotating for threading. "On-Off" switch built into base. Platform base threaded for ¼" and ⅜" camera tie-down screws. Rubber covered cable with plugs included.



Small GYRO Tripod

This light weight GYRO Tripod performs with all the efficiency of larger, heavier and costlier tripods now in use.

New, small size GYRO tripod handles all 16mm. professional type cameras: Mitchell 16mm.; Auricon single system; Maurer 16mm.; motor-driven Cine Special; also 35mm. motor-driven Eyemo with 400' magazine. It features Super Smooth Pan & Tilt Actiton.

Positive pan-locking knob. Tilt locking lever. Quick wrist action locking knob for leg height adjustments. Pan handle can be inserted at 3 different positions on tripod head for operator's convenience or extreme tilt work. Legs are hard maple specially treated and warp resistant. Tripod head is Dow Metal magnesium and aluminum. Built-in spirit level. Swivel tie-down rings. Platform available with either ⅜" or ¼" camera screw.

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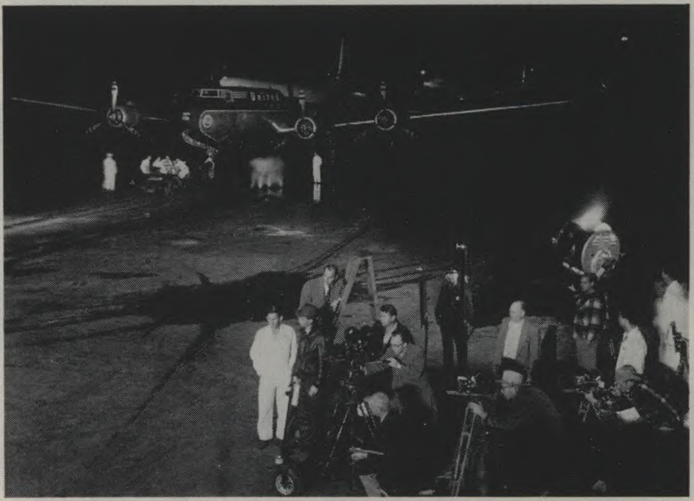
Documenting An Airline's Operations

Skillful aerial photography in 16mm color enhances third Cate & McGlone promotion film for United Air Lines.

By FREDERICK FOSTER



NIGHT SCENES at the airport were photographed by a battery of three 16mm cameras—a 16mm Mitchell and two Cine Kodak Specials. Portable motor generator supplied power for the huge arcs which furnished illumination for the large exterior sets.

IN A NUMBER of major cities throughout the U.S., United Air Lines is currently screening its latest 16mm color film production, "United 6534," produced by Cate & McGlone of Hollywood. Industrial film producers, 16mm cinematographers, and others interested in seeing a top-flight 16mm color production will tab this as "must see." For two reasons: (1) it is an excellent job of color photography and (2) it clearly demonstrates the value of the careful pre-planning that went into this 1,050-foot promotional film—planning of the calibre given the average feature film production.

Ted Cate and Ed McGlone are the same team which turned out United's highly successful "High-Way to Hawaii" and "Skyway to Yosemite." Their former extensive airline experience is reflected in the authencity of their latest film. McGlone spent 17 years with United; Cate formerly was Director of Advertising for Western Air Lines.

Ed McGlone directed the photography and personally photographed all of the aerial shots which do so much to enhance the production pictorially. Scenes from the air showing a panorama of New York City at sunset add tremendously to the pictorial impact of the closing sequence

Research, documentation and narration for "United 6534" were done by Charles Palmer, major feature writer

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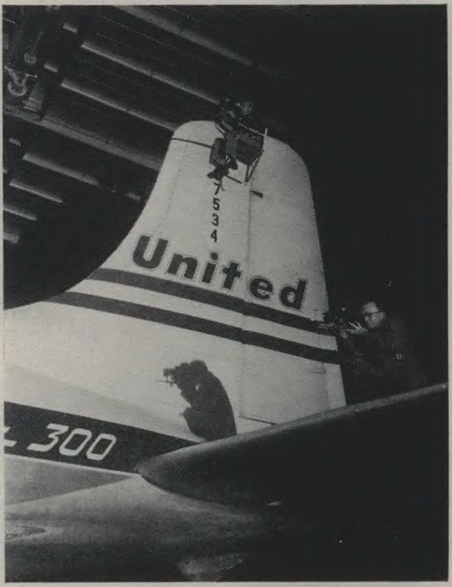
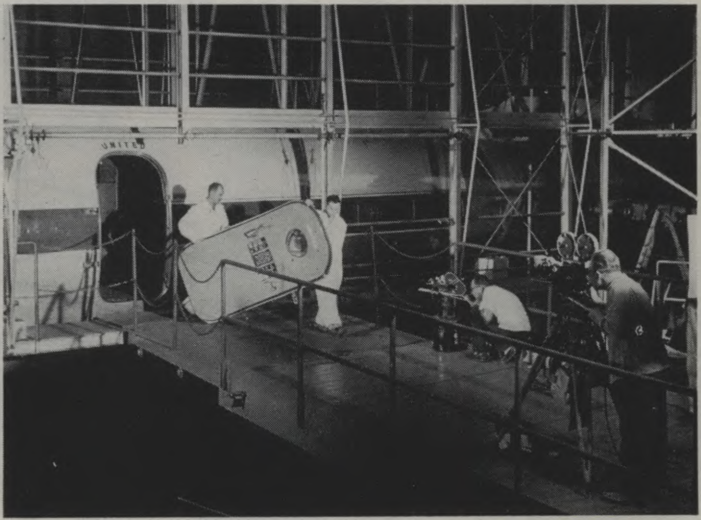


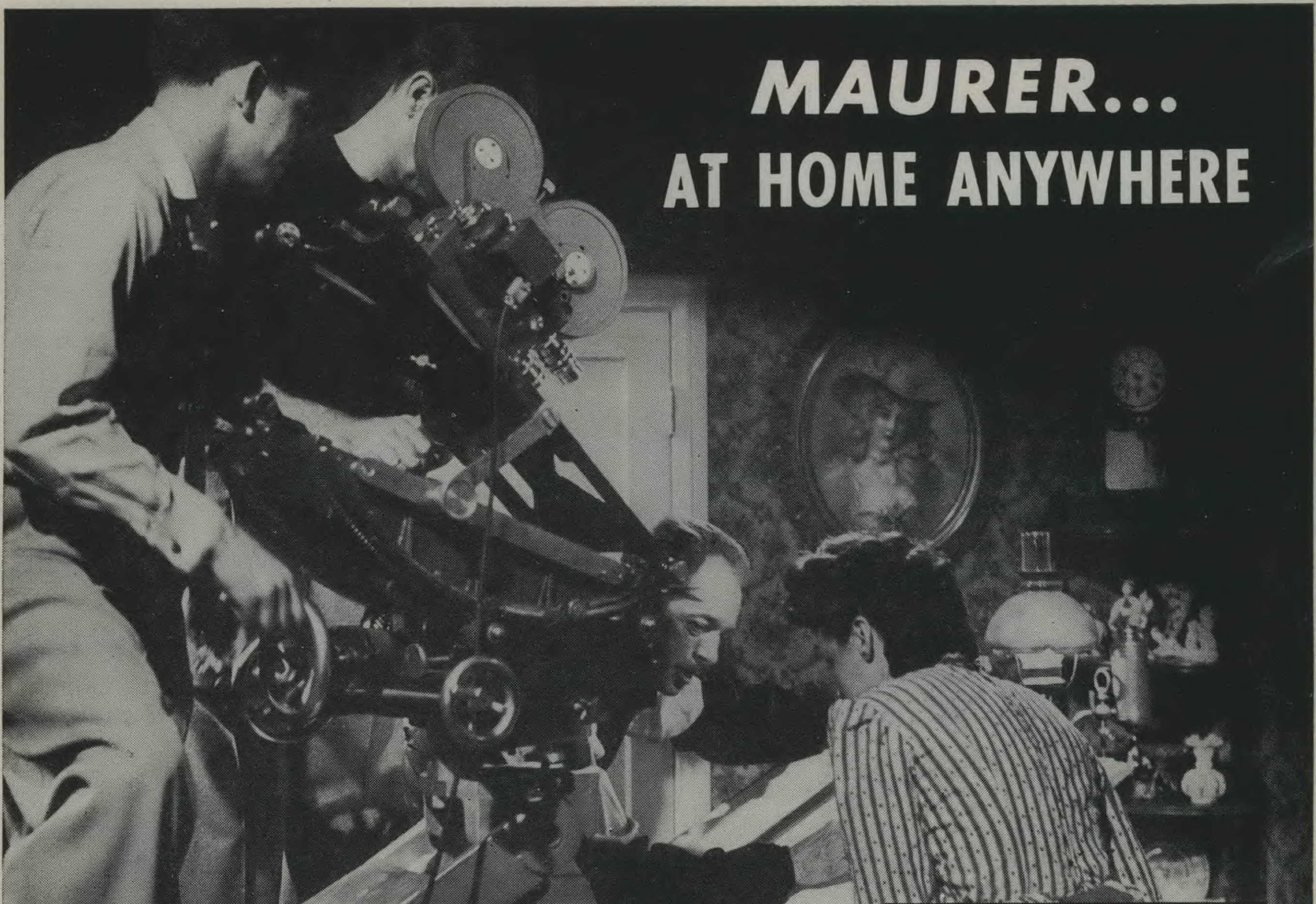
ED McGLONE'S head almost touches ceiling of repair dock as he shoots from chair secured to tip of DC-6's tail. Another cameraman, Al Stensvold, crouched on stabilizer, makes shots from a lower angle.

MANEUVERING the star of the picture — United Air Lines' "6534" — into position for a shot showing plane coming into dock for inspection. Site was United's maintenance base in San Francisco.

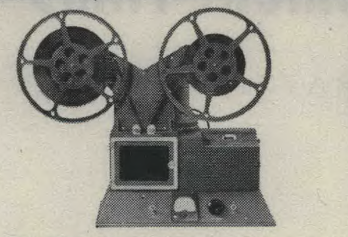


EVERY SHOT in the script was covered from different angles by two or more cameras. Here dismantling of "6534" begins as cameras record the removal of door and other parts.

MAURER... AT HOME ANYWHERE

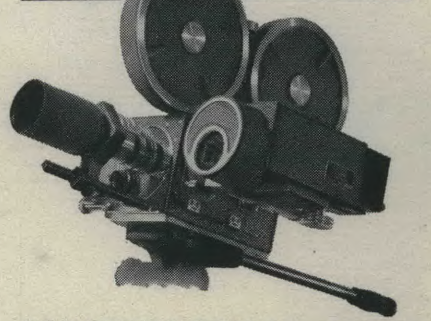


THE 16MM. SOUND-ON-FILM RECORDING SYSTEM. Capable of recording either negative or direct positive variable area and variable density sound tracks.



THE 16MM. FILM PHONOGRAPH. Its unique optical system gives an unusually narrow reproducing image with high light output.

THE MODEL F PRIME RECORDING OPTICAL SYSTEM AND GALVANOMETER, a complete light modulating unit for recording sound photographically upon standard film.



THE MAURER 16MM. CAMERA. Equipped with unique precision high-power focusing. Equipment includes: 235° dissolving shutter, automatic fade control, viewfinder, sunshade and filter holder, one 400-foot gear-driven film magazine, a 60-cycle 115-volt synchronous motor, one 8-frame handcrank, power cable and a lightweight carrying case.

The Maurer 16mm. camera is at home for every professional requirement—and little wonder since it's the only "16" specifically designed for professional use. The Maurer has many unique features—its simplified operation, hair-line accuracy, and job after job dependability, all make it the favorite choice of those who consider time and expense important—and a fine motion picture even more so.

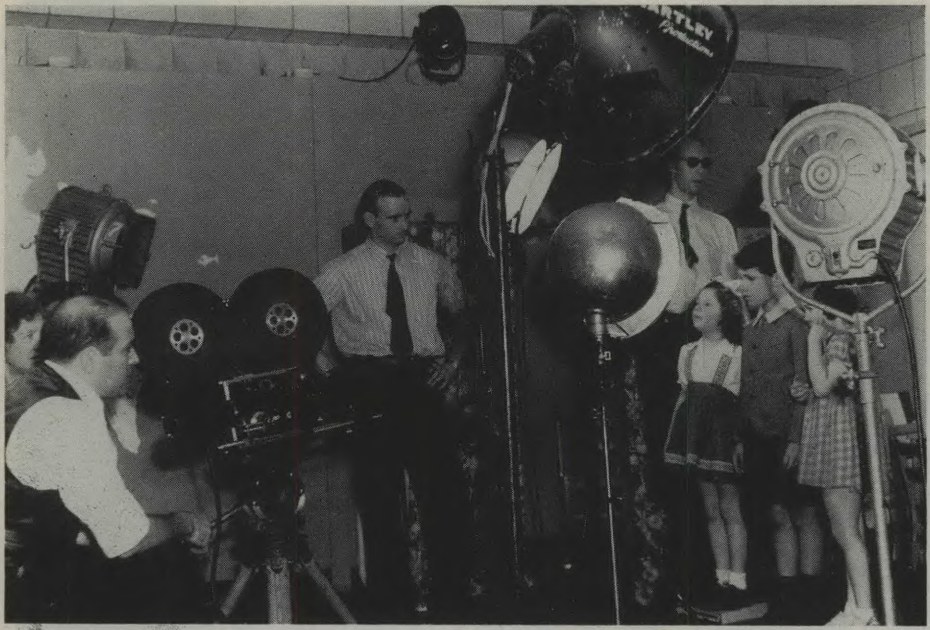
For details on this and other Maurer equipment write:

J. A. MAURER, INC.

37-01 31st Street, Long Island City 1, New York
1107 South Robertson Blvd., Los Angeles 35, California

16mm maurer

CABLE ADDRESS:
JAMAURER



SUCCESSFUL production of TV commercial films requires ample equipment resources—the best camera, lights, lenses, and crane or dolly for zoom and trucking shots. Whether these are owned or rented, they figure prominently in ultimate cost of production.

Planning And Estimating TV Spot Announcement Films

By JOHN H. BATTISON

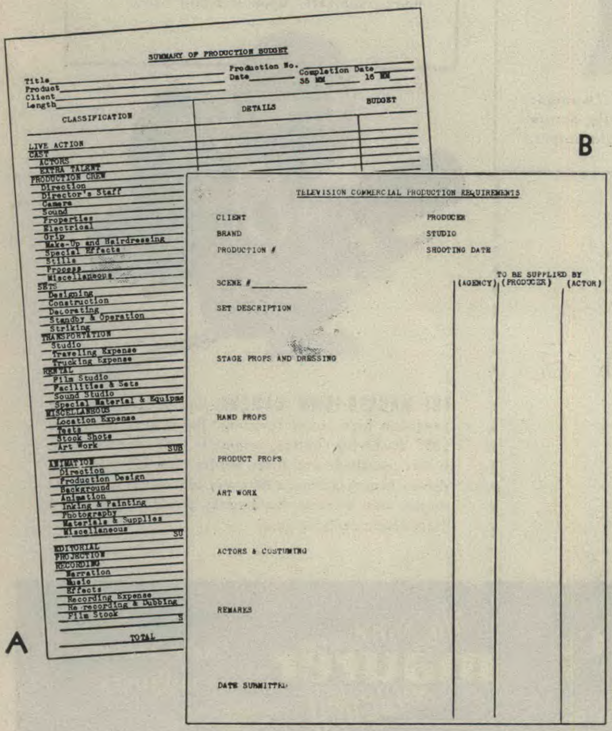
IN CONCLUDING the initial article in this series, which appeared in the October issue, mention was made of the tremendous importance of adequately planning in advance all television films, particularly short commercial spot announcements. The fact that such brief films, running only 3, 20 or 60 seconds, are involved often leads the unitiated to believe they require but brief preparation. Actually, a good TV spot announcement requires almost as much planning as a video feature film—insofar as detail is concerned.

We are discussing this problem of planning, of course, from the producer's or cameraman/producer's point of view. To avoid production losses, a TV film job must be completed at or below the figure quoted in the original bid or estimate. Business obituaries are already plentiful in film production centers where many entered the video film making business in a rush, made rash bids in order to get the business in a hurry, and quickly wound up out of business because they failed to consider such costs as extra time lost on the set, neglected to figure in an important prop, or failed to arrive at a clear understanding with the client as to "who provides what."

The estimating phase of TV film production is important to the very existence of the film producer, so it behooves him to establish a fool-proof, methodical procedure for arriving at just estimates. Illustrated are two forms which this writer has employed in planning the production of and preparing estimates on TV commercial films for a large advertising agency. Whenever an account group requested an estimate on a storyboard or TV copy, the form A shown below was employed in compiling an estimate of how actual production costs should fall. Thus, when other producers making competitive bids presented their cost estimates, I had a carefully analyzed comparison sheet. This same form can be used by a film producer for pricing a job, although in such a case he would have to provide a further breakdown of various cost items. As an example, in the case of a freelance film producer, he would invariably have to include the cost of rented camera equipment, etc.

The question of the film size to be used—35mm or 16mm—is usually determined by the nature of the job itself. Most of the major advertising agencies specify 35mm for the original negative, even though many of the final prints are made in 16mm.

(*Continued on Page 470*)



A

SUMMARY OF PRODUCTION BUDGET

Title
Product
Client
Length
Production No.
Date
Completion Date
35 MM
16 MM

CLASSIFICATION	DETAILS	BUDGET
LIVE ACTION		
CAST		
ACTORS		
EXTRA TALENT		
PRODUCTION CREW		
Direction		
Director's Staff		
Camera		
Sound		
Properties		
Electrical		
Grip		
Make-Up and Hairdressing		
Special Effects		
Stills		
Process		
Miscellaneous		
SETS		
Designing		
Construction		
Decorating		
Standby & Operation		
Striking		
TRANSPORTATION		
Studio		
Traveling Expense		
Trucking Expense		
RENTAL		
Film Studio		
Facilities & Sets		
Sound Studio		
Special Material & Equipme		
MISCELLANEOUS		
Location Expense		
Tests		
Stock Shots		
Art Work		
SUB		
ANIMATION		
Direction		
Production Design		
Background		
Animation		
Inking & Painting		
Photography		
Materials & Supplies		
Miscellaneous		
SU		
EDITORIAL		
PROJECTION		
RECORDING		
Narration		
Music		
Effects		
Recording Expense		
Re-recording & Dubbing		
Film Stock		
S		
TOTAL		

B

TELEVISION COMMERCIAL PRODUCTION REQUIREMENTS

CLIENT
BRAND
PRODUCTION #
PRODUCER
STUDIO
SHOOTING DATE

SCENE #

	TO BE SUPPLIED BY (AGENCY)	(PRODUCER)	(ACTOR)
SET DESCRIPTION			
STAGE PROPS AND DRESSING			
HAND PROPS			
PRODUCT PROPS			
ART WORK			
ACTORS & COSTUMING			
REMARKS			
DATE SUBMITTED			

TWO CHARTS used by author for analyzing and preparing cost estimates on TV commercial films. Chart A is used for cost analysis, and chart B for production analysis preparatory to fixing costs.

The world's finest lens series . . .

BAUSCH & LOMB OPTICAL CO. ROCHESTER N.Y. U.S.A.
BALTAR

. . . for the world's finest cinematographers

BALTAR

For image quality that sets the highest professional standards, the Baltar series is internationally favored for news, studio and industrial work. Eight focal lengths, to meet your most exacting needs in color and black-and-white: 152mm, f/2.7; 100mm, 75mm, 50mm, 40mm, 35mm, 30mm and 25mm, f/2.3. All lenses are Balcote anti-reflection surfaced. Order from your professional camera manufacturer.

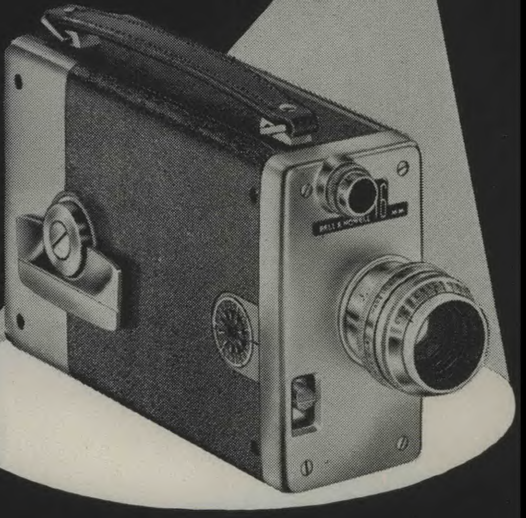
B&L 8mm and 16mm Animar Lenses . . . the series you can recommend to your friends with confidence for professional quality in their *home movies.* At all authorized Animar dealers.

BAUSCH & LOMB

OPTICAL COMPANY ROCHESTER 2, N. Y.

WORLD PREMIERE

LIGHTS!



THE NEW 16 MM

Bell & Howell "200"

With 1" f/2.5 lens, $189.95

Turret model
with 1" f/2.5 lens, $234.95

winner of the Society of Motion Picture Art Directors Award

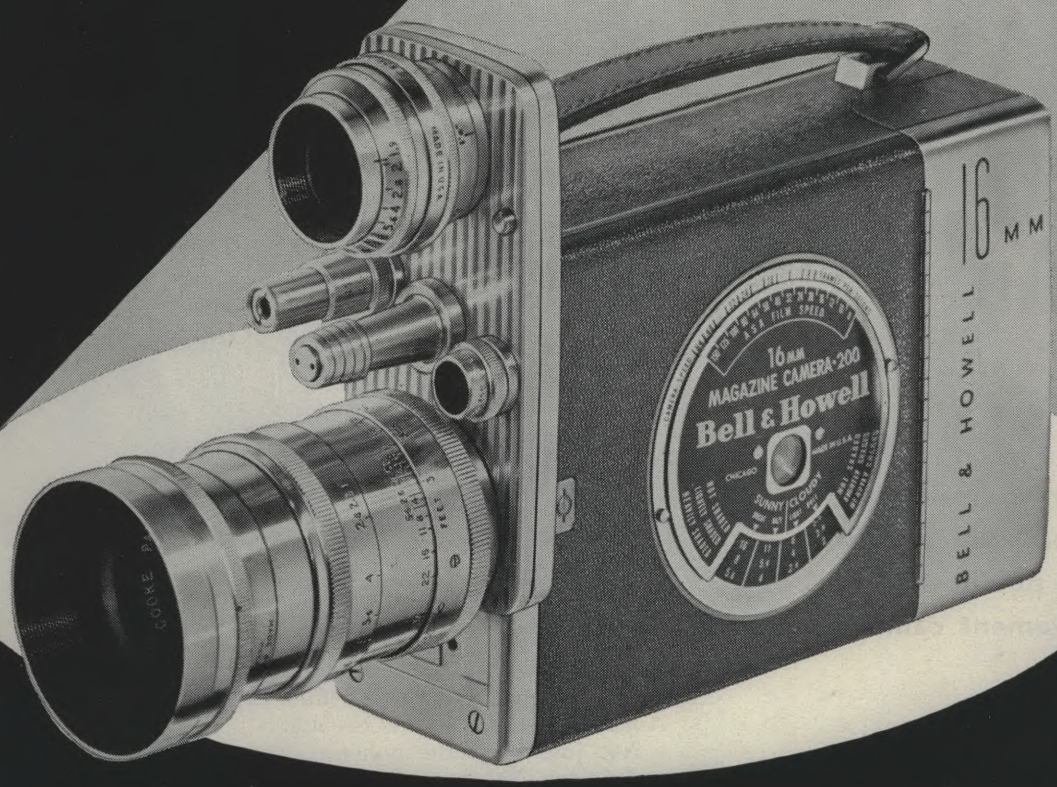
****Guarantee:* During life of the product, any defect in workmanship or material will be remedied free (except transportation**

OF THE NEW “200”

The smartly styled “200” features a rich gray scuff-proof finish with satin chrome trim. It loads quickly with a magazine of 16mm film . . . has 5 precisely calibrated speeds (including true slow motion) . . . a film plane mark . . . full 12½-foot controlled film run . . . convenient ratchet winding . . . continuous run lock and single frame release . . . is equipped with a new, versatile, built-in exposure guide . . . finest 1" f/2.5 Filmocoted lens that can be quickly interchanged with other lenses . . . and a positive viewfinder. Like all Bell & Howell cameras, the new “200” is guaranteed for life.

CAMERAS!

. . . and what cameras! Here, at last, is beauty of design in a movie camera . . . *equal* to the craftsmanship and operating performance represented by the Bell & Howell name! Examine the rich styling of this brand new Bell & Howell “200”—compare it with any other make *feature for feature.* You'll *know* that here is the camera of cameras in the 16mm field.



The Swifturn turret model has all the features of the single lens “200” . . . plus the versatility of lens and matching positive viewfinder that rotate simultaneously and instantly.

ACTION!

Now is the time to take action . . . to *see* this new “200” at your camera dealer's . . . to *choose* this award-winning camera for your very own . . . to *make* it the number one gift this Christmas for your favorite person. Remember, liberal terms and trade-in are offered by most dealers.

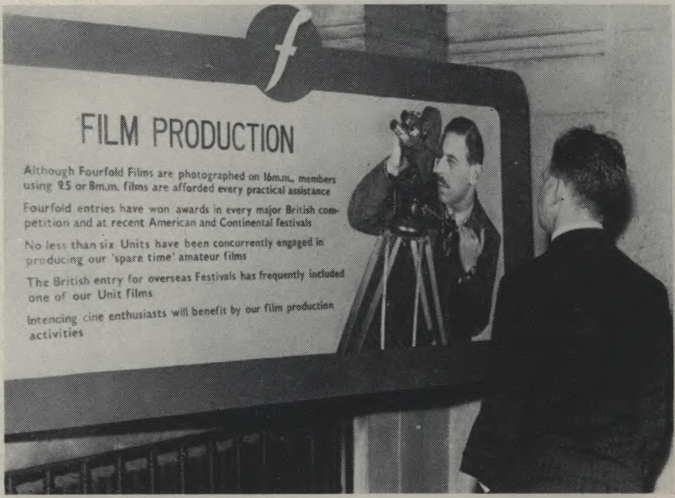
You buy for life when you buy Bell & Howell!

ANNUALLY, the Ten Best British amateur films are exhibited publicly by various cine clubs under sponsorship of Amateur Cine World, British cine publication. Above photo shows typical crowd queued up awaiting admittance to premiere showing by Fourfold Film Society, London.

PRESENTED in large halls or theatres in the best professional manner, showings of British amateur films attract large public audiences, build greater interest in the amateur film movement.

Good Films Deserve An Audience...

So long as the amateur works within the closed circle of his local club, almost entirely isolated from public opinion, the amateur film movement cannot easily grow in stature.



FILM PRODUCTION

Although Fourfold Films are photographed on 16m.m., members using 9.5 or 8m.m. films are afforded every practical assistance

Fourfold entries have won awards in every major British competition and at recent American and Continental festivals

No less than six Units have been concurrently engaged in producing our 'spare time' amateur films

The British entry for overseas Festivals has frequently included one of our Unit films

Intencing cine enthusiasts will benefit by our film production activities

PROMOTION of the highest order is employed by British clubs offering the film showings. Numerous posters like one above are placed strategically in public buildings where they attract wide public interest.

By GORDON MALTHOUSE

Editor, "Amateur Cine' World," London.

IN RECENT ISSUES of *American Cinematographer*, Alvin D. Roe expressed the view that the way to greater authority of the amateur film movement and to the production of better amateur films lies in organization and in collaboration of individuals; and he pointed to England as a country where this state of affairs does obtain.

It is certainly true that many minds and hands must go to the making of the ambitious film, but it seems to me that there must be organization and collaboration at the receiving end no less than at the producing end. It is not merely that good films deserve an audience. They *need* it. Indeed, if ever more than a handful of good amateur productions are to emerge from the miles of film exposed every year, the stimulus of an audience is essential.

Not just a coterie audience. Not an audience of fellow technicians. Not the zealous groups that keep the art theatres going. No, the people who really matter: the public. The amateur is so often told that his most precious asset is complete freedom from the dictates of box office that he tends to ignore it altogether. And so he makes his films only for himself, and inevitably the result must in so many cases be sterile.

You may object that since the type of film produced by nine out of ten amateurs is designed expressly for home consumption, a public audience is unnecessary to it, anyway. But to say that is to beg the question, because even the home circle is an *audience* whose tastes the producer ought to take into account, but rarely does.

The wider circulation which a club can achieve is reflected

(*Continued on Page 464*)

TO ALL MAGAZINE CAMERA OWNERS!

Now *you* can get the advantages of Ansco *Natural* Color Film!

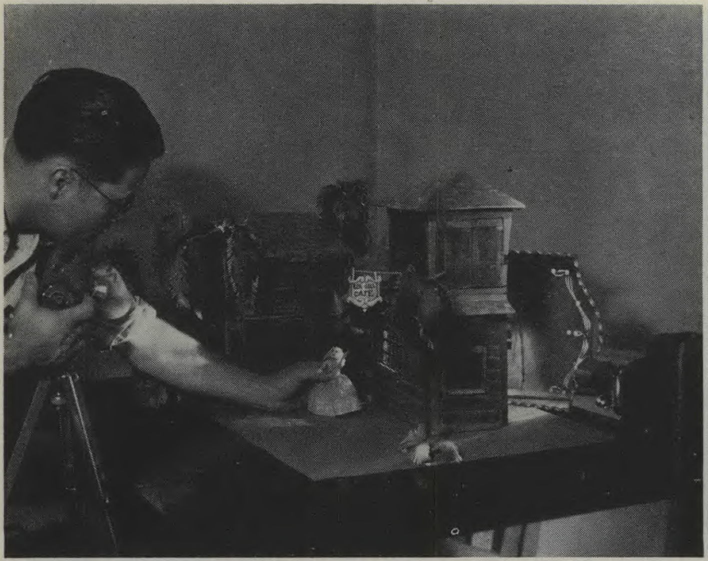
Your dealer now has magazines of Ansco Color Film, in both 8 and 16mm sizes! Pick up a good supply for your camera today, and begin discovering first hand what a difference Ansco *Natural* Color can make in your movies.

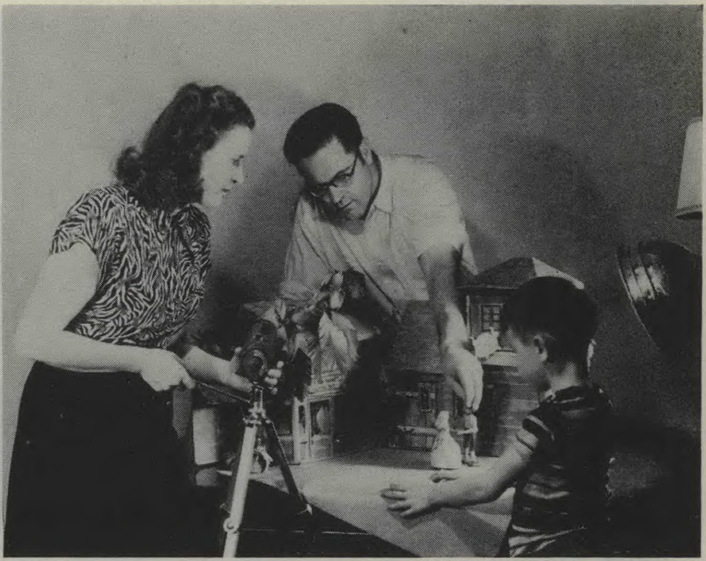
You'll get soft, real-life flesh tones in your pictures . . . natural blue skies . . . lifelike green in foliage. Try a magazine the next time you shoot, and see your pictures come alive with nature's own true colors! Ansco Color gives you *sparkling* screen images.

NOW AVAILABLE IN 8 AND 16MM MAGAZINES; 50 AND 100 FOOT ROLLS OF 16MM FILM.

Ask for
ANSCO *NATURAL* COLOR FILM

ANSCO, BINGHAMTON, NEW YORK. A DIVISION OF GENERAL ANILINE & FILM CORPORATION. *"FROM RESEARCH TO REALITY."*


SHOOTING a night scene for "One Summer Day." A small mirror set up behind the miniature set reflects light from a slide projector through a window, backlighting the puppet.


THE AUTHOR, aided by his wife and small son, executes a difficult shot involving two puppets in action. Simple lighting is provided by a lone photolamp in reflector.

Animation With Puppets

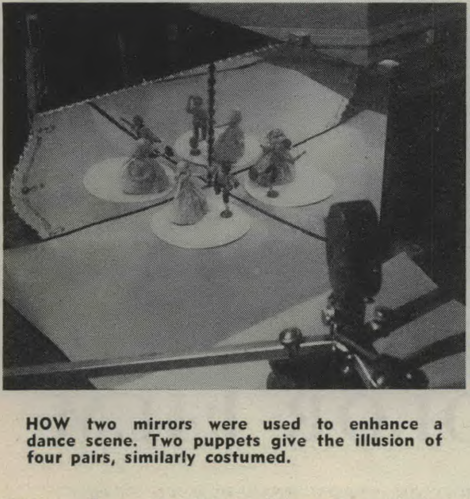
By GLEN H. TURNER

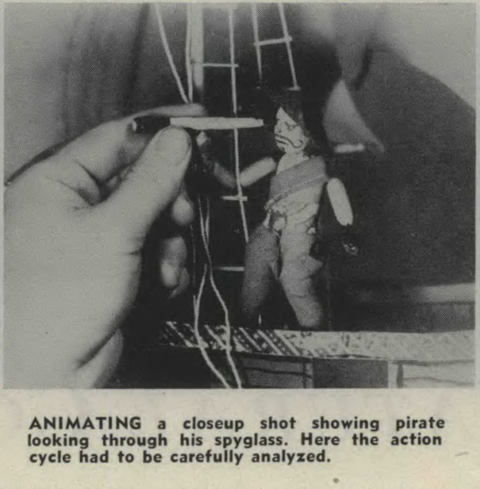
A PROMISING FIELD which more and more amateur movie makers are exploring is that of animated movies employing puppets and miniature sets. This phase of movie making has many advantages over pictorial cinematography in that it can be practiced indoors, in bedroom, attic or kitchen nook — wherever a small stage can be set up and left intact for a reasonable time until shooting is completed. For a small expenditure of cash, you can buy the paper, paint, balsa wood and glue necessary for construction of the puppets; and anyone with reasonable artistic or creative talent can make his own puppets and miniature sets.

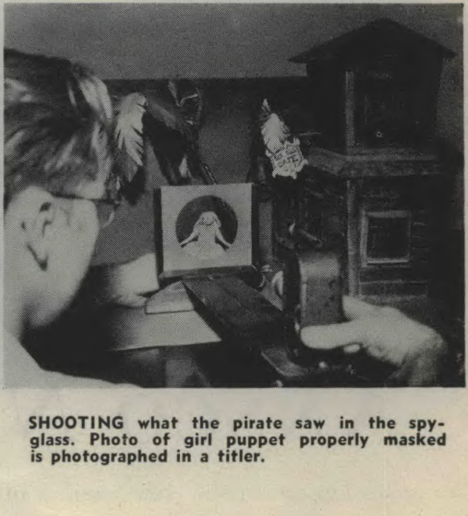
One of my first adventures in this field resulted in the 8mm puppet film, *One Summer Day*, which won an award in a recent national amateur film contest. Some "backstage" photos made during this production appear here, and they show some of the techniques as well as the props and puppets which were employed in making the picture.

Although the story for a puppet film is of prime importance, one of the first considerations must be given the puppets themselves; for much of the success of the film will depend upon smooth animation with as much realism as possible. For this reason, the puppets—whether purchased already made, or are made by yourself—require certain mechanical characteristics such as proper size, light weight, flexibility, and yet they must be rigid enough to enable them to hold most any pose without toppling over. Their size should be such that it is possible to include reasonable detail in the features, yet not so large that they require sets of inordinate size. The puppets I used in *One Summer Day* were approximately eight inches in height—a quite satisfactory size in that

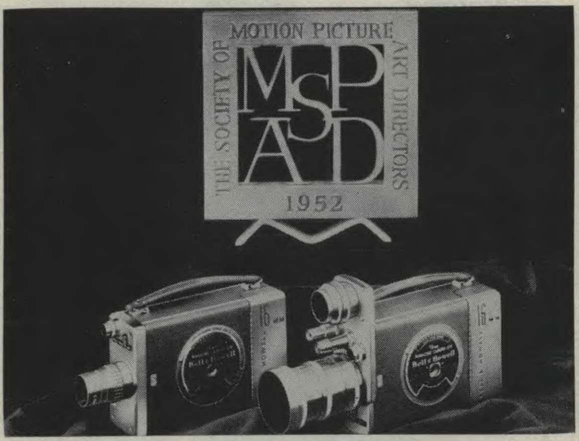
(*Continued on Page 472*)


HOW two mirrors were used to enhance a dance scene. Two puppets give the illusion of four pairs, similarly costumed.


ANIMATING a closeup shot showing pirate looking through his spyglass. Here the action cycle had to be carefully analyzed.


SHOOTING what the pirate saw in the spyglass. Photo of girl puppet properly masked is photographed in a titler.

New Bell & Howell Cine Cameras



TWO NEWLY-ANNOUNCED Bell & Howell cine cameras have won Society of Motion Picture Art Directors' Awards for 1952. Pictured above, they are new single-lens and turret-front magazine-load 16mm cameras.

In Hollywood, on November 8th, Representatives of the Bell & Howell Company, Chicago, will be presented with the Society of Motion Picture Art Directors' Award for 1952 for the design and styling of Bell & Howell's two new 16mm motion picture cameras—the models 200 and 200-T—latest in the company's line of magazine load cine cameras.

Acclaimed the "most exciting cine cameras ever designed," the prize-winners combine modern, functional styling with a finish of dove grey and chrome. The covering is scuff-proof Vinyl, which has all the beauty of leather with greater durability.

In addition to beauty of design, both cameras have important new performance features: The model 200 (single-lens) and the 200-T (turret) have positive viewfinders, which enable the operator to see exactly what he gets on film. The 200-T has streamlined 2-lens turret which gives the camera added versatility. A quick flick of the turret moves the second lens and its matching viewfinder into position ready for instant use.

A film plane mark engraved on the side of the camera housing permits accurate measurements of critical focusing distances for closeups; an important feature of many professional cameras, it will be appreciated by those amateurs who do precision cinematography.

Winding the film has been made quick and easy by a ratchet key which works with a back-and-forth motion similar to the winding stem of a watch.

The built-in exposure guide on side of the camera is calibrated for ASA film speed ratings, and the "exposure index" figures on the guide match those on the click-stop lens.

A three-position starting button can be set for normal operation, for continuous running, or for single-frame exposures for time lapse and animation work. The camera has five accurately calibrated speeds: 16, 24, 32, 48 and 64 f.p.s. Exposed footage is read directly from the film magazine dial through a window in the center of the exposure guide.

An interesting feature is the fact the model 200 can be converted at any time to a model 200-T with the addition of the two-lens turret by the factory in Chicago, or by any of the company's branch service offices.

Price of the model 200 camera with Filmcoated 1" f/2.5 lens is $189.95; the 200-T with 1" f/2.5 lens only is $234.95.

In the 8mm group, Bell & Howell Company also introduces its entry into the low-price field with its new model 134W single-lens 8mm camera. Simultaneously, the company announced the re-introduction of its popular model 134TA tri-lens 8mm camera.

The new 134W, with half-inch f/2.5 coated lens, sells for $79.95, including excise tax. It takes spooled double-8 film and features "drop-in" loading that makes film changing quick and easy. There are no sprockets to thread, no loops to form and no gate to remember to close—making it as simple to use as a magazine-load camera. The film-gate closes automatically as the door of the camera is shut.

A built-in exposure guide indicates the correct lens setting for the hour and light conditions. It has a five-foot film run and four film speeds: 8, 16, 24, and 32 f.p.s.

The model 134TA turret model 8mm camera, with half-inch f/2.5 coated lens, is $129.95, including excise tax. Among its outstanding features are matching positive viewfinders and through-the-lens focusing, assuring accuracy in filming closeups and titles. It takes spooled double-8mm film, has the same easy-to-load feature that marks other Bell & Howell 8mm cine cameras. Film speeds provided are: 16, 24, 32, 48, and 64 frames per second.

Lenses In Photography, by Rudolf Kingslake, covers those aspects of lenses and photographic optics that are of interest to amateur and professional photographers. Aim of book is to make understandable the workings of lenses.

Announcing

AMERICAN CINEMATOGRAPHER'S

1952 Amateur Motion Picture Competition

for the

AMERICAN CINEMATOGRAPHER ANNUAL TROPHY AWARDS

OPENS — December 1, 1951
CLOSES — March 1, 1952

SPONSORED jointly by American Cinematographer and American Society of Cinematographers to select the "Top Ten" amateur films of 1951-52. Open to all amateur movie makers residing within the continental United States and its possessions.

ELIGIBLE for entry are 16mm and 8mm amateur-made films regardless of subject, either black-and-white or color, silent, or with sound on film.

AWARDS — The first ten films with highest rating in the judging will receive gold American Cinematographer Trophies. The ten next best will receive Honorable Mention certificates.

●

RULES

- Entries must be wholly amateur-produced.
- All sound films must be wholly amateur-recorded, regardless of sound medium used.
- Film length: maximum of 800 feet for 16mm sound or silent entries; 8mm entries, 400 ft.
- Sound medium (discs, tape, wire) must accompany film in same package.
- Entrants must pay transportation on films and sound records both ways.
- No film should be submitted before December 1, 1951. Both reels and reel containers, and containers of sound medium must bear labels indicating name and address of entrant.
- Entry blank must be submitted in advance.

WRITE FOR ENTRY BLANK TODAY, USING COUPON BELOW.

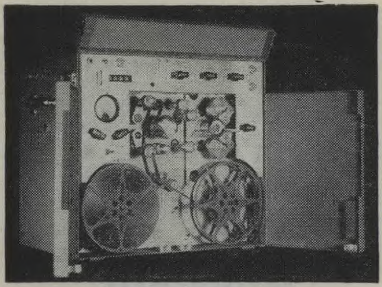
Contest Chairman,
AMERICAN CINEMATOGRAPHER,
1782 No. Orange Drive,
Hollywood 28, Calif.

Sir: Kindly send me official entry blank for AMERICAN CINEMATOGRAPHER'S 1952 Amateur Motion Picture Competition. I plan to enter an 8mm._____16mm._____ film, length __________ft.

Name ____________________

Address ____________________

City__________ Zone____ State________



Reevesound PV 100 Portable Magnetic Synchronous Sound Recorder

MOTION PICTURE PRODUCTION EQUIPMENT

- REEVESOUND RECORDERS
- CAMERAS
- MOTION PICTURE STUDIO EQUIPMENT

We have more than 20 years of experience in supplying and installing motion picture production equipment all over the world and have set up complete studios for the governments of many nations. Our engineers can save you considerable amounts of money through their expert recommendations.

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10 East 52nd Street, New York 22, N.Y.
Cable Address: "REEVESQUIP", N.Y.

Manufacturers, Technical Consultants and Agents Export Division of Reeves Soundcraft Corp., Manufacturers of Recording Discs and Magnetic Tape.

RUBY EDITORIAL SERVICE, INC.

Complete Film Editorial Facilities for Motion Picture & Television Production

SOUNDPROOF AIR-CONDITIONED PRIVATE EDITING ROOMS
Modern Equipment for
EVERY TECHNICAL REQUIREMENT
35 & 16mm.

RENTALS BY DAY, WEEK OR MONTH
ALL NEW MOVIOLA EQUIPMENT

Equipment Available for Off-the-Premise Rentals.

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Tel: CIrcle 5-5640

EYEMOS
SINGLE - LENS CAMERAS
With 2" Lens and Case; late style governor. Guaranteed.

CAMERA EQUIPMENT CO.
1600 Broadway New York 19, N.Y.

Latest In Cinema Technology Revealed At SMPTE Convention

DURING THE 70th Semi-annual convention of the Society of Motion Picture and Television Engineers, held in Hollywood last month, the film industry's engineering leaders took time out from their technical discussions to pay tribute to the men who made outstanding contributions to the technical advancement of the motion picture art during the past year.

Top honors went to Earl I. Sponable, technical director of 20th-Century Fox and a past president of the Society, who became the first man to receive two awards simultaneously. He was the recipient of the Samuel L. Warner Memorial Award. Sponable also was presented with the SMPTE Progress Medal, conferred in recognition of his efforts to improve quality of the motion picture industry.

The Society's highest honor for excellence of a report published in its official Journal during the year was conferred jointly on A. B. Jennings, W. A. Stanton, and J. P. Weiss, of the DuPont Co., Parlin, N. J., for their paper on "Synthetic Color-Forming Binders for Photographic Emulsions."

In recognition of outstanding service to the motion picture industry, the Society elevated 16 of its members to the rank of Fellow. They are: Don M. Alexander, Colorado Springs, Colo.; Clarence S. Ashcraft, New York; Louis A. Bonn, New York; Howard A. Chinn, New York; Alan A. Cook, Rochester, N. Y.; Ellis W. D'Arcy, Chicago; William C. DeVry, Chicago; O. B. Hanson, New York; William F. Kelley, Hollywood; Frank LaGrande, New York; Cornelius G. Mayer, London, England; Otto H. Schade, Harrison, N. J.; Huber J. Schlafly, New York; Vaughn C. Shaner, Hollywood; Ethan M. Stifle, New York; and Lloyd Thompson, Kansas City.

The first complete disclosures on the new Ansco Color Negative-Positive Motion Picture Film Process were made during the convention. Dr. Herman H. Duerr, Technical Director of Ansco, described in detail the new color process for the motion picture industry, and screened a test reel made from negatives supplied by MGM Studio, which is currently using the new color material in one of its forthcoming productions.

A further boost to the Hollywood trend of making more and more feature-length pictures in color was revealed in a new procedure for making color release prints. The new method, described in a paper by C. R. Anderson, N. H. Groet, C. A. Horton, and D. M. Zwick of Kodak Research Laboratories, is less complicated and less expensive than previous color motion picture printing. It involves two new materials—Eastman Panchromatic Separation Safety Film and Eastman Color Internegative Safety Film. In their paper the scientists described structure of the new film and outlined printing equipment requirements. As part of their presentation, Eastman Color Print Film was projected.

Development for the armed forces of

EARL SPONABLE, 20th-Fox technical director, is first man to be honored with two awards from the SMPTE. Awards, made at Hollywood Convention last month, were for technical achievement in motion pictures. Making presentations are (from left) Col. Nathan Levinson, Jack Warner, (Mr. Sponable receiving) and Peter Mole, Society president.

a unique, new motion picture camera which permits automatic film loading and can be used under all kinds of weather conditions was disclosed by G. J. Badgley of the U. S. Naval Photographic Center, Washington.

Called the Badgley automatic film threading camera, it was described by its inventor as "practically foolproof as to loading, and which could be used by relatively untrained personnel in extreme weather conditions, whether the cameraman's hands are bundled in gloves or trembling with fatigue."

Outstanding innovation of the camera is a newly designed film magazine which may be replaced and the camera put into operation "in less than ten seconds," according to Badgley. This will permit practically continuous filming of combat action, he pointed out.

The camera shown was declared by Badgley to be a prototype model which will serve as a production model for at least three types of cameras to be made for the Navy. They are: a combat version, comparable to the present amateur camera; a professional version, both 16 and 35mm; and a television version.

Three-dimensional films were envisioned as the most promising theatre entertainment of the future if the resources of the motion picture industry could be put behind its further development. This prediction was made by Raymond Spottiswoode, of Middlesex, England.

Included in his presentation was the first showing in this country of a three-dimensional abstract film with stereophonic music. Titled *Around Is Around*, it was produced by the National Film Board of Canada and was described as the first of this type to be made anywhere.

Making new prints from shrunken, older motion picture films will now be less of a problem through use of a new variable-pitch sprocket developed in Kodak Research Laboratories. J. G. Streiffert, Kodak scientist, reported on the new sprocket.

The device has a unique sprocket tooth whose driving face is a plane lying on a radius of the sprocket. This is used to improve longitudinal registration of the film over that obtained with conventionally shaped, curved profile teeth. The sprocket, with a supporting drum, accommodates shrinkage through varying pitch.

New portable magnetic recording equipment representing a marked advance in the usefulness and economy of magnetic recording for motion pictures and television was disclosed by the Radio Corporation of America.

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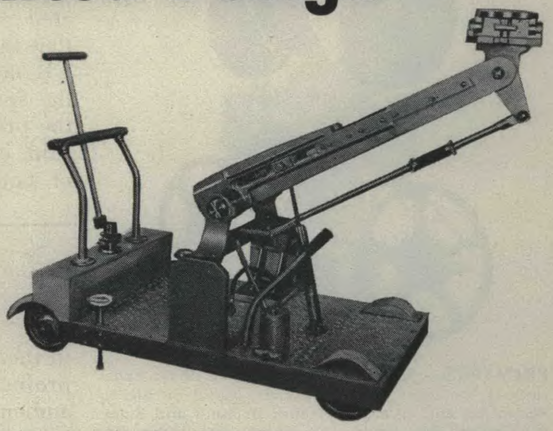

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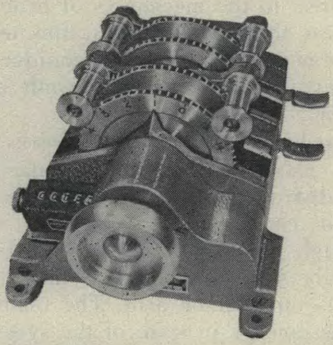

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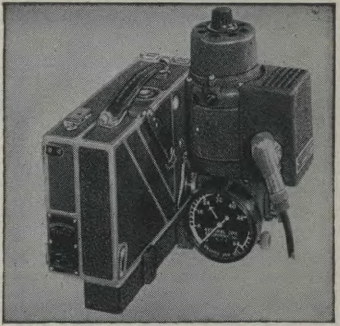

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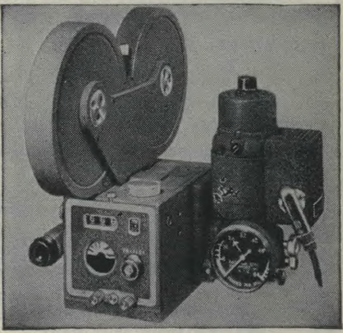

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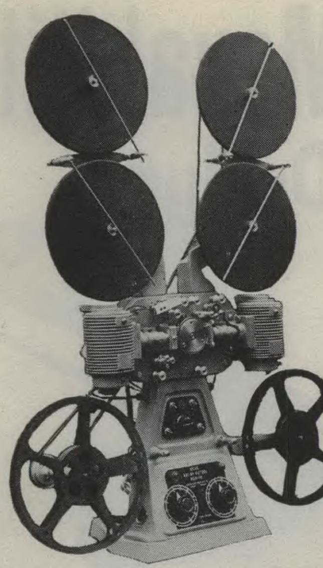

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A change in the present proposed standards for placement of the magnetic sound track on 35mm film was urged by Loren L. Ryder, sound director of Paramount Pictures. In a report delivered to the Society, Ryder suggested that the magnetic sound track be placed 131 mils (131/1000th of an inch) from the sprocket hole of the film instead of the present 50 mils. This suggestion, he said, is based on extensive studies made of both methods, with results showing that interference from sprocket holes is encountered in the 50 to 100 mil area.

In the discussion which followed presentation of Ryder's paper, representatives of three companies presented data tending to refute the Paramount studies. In reply to discussion from the floor, Ryder stated that Paramount will continue to record sound tracks at 131 mils.

A total of 65 papers were delivered during the five-day convention — the largest of the S.M.P.T.E. held to date in Hollywood.

GOOD FILMS DESERVE AN AUDIENCE

(Continued from Page 458)

in the type of subject chosen, but it also profoundly affects the treatment. The audience for the club film is for the most part composed of practising amateur cinematographers, so it is natural that they should take a disproportionate interest in the mechanics of production. Hence the average club film tends to become an exercise in technique, often expert but lacking in warmth and vitality.

So long as the amateur works within this closed circle, almost entirely isolated from public opinion, the movement cannot easily grow in stature, though it can — and does — grow in numbers. And, equally, the films it turns out will be arid. The really good films emerge in spite of the system, not because of it.

That this appraisal of the situation is basically accurate is shown by the results of a scheme designed expressly to combat it. We have in England a Ten Best Films of the Year competition organized by the magazine *Amateur Cine World*. Since the war it has gained astonishingly in popularity and has materially helped to enhance the prestige of amateur films solely because of the one added attraction missing from the pre-war contests: the stimulus of an audience.

Copies of the prize-winning films travel throughout the country and reach as far as the British Commonwealth. Any club, organization or large business house can have them on one condition: that a minimum audience of 200 is guaranteed. That means that a club must hire a local hall or theatre, for neither membership nor club premises would be large enough to satisfy the stipulation. And that in turn means that the presentation has to be specifically for the general public.

The films have been a success wherever they have been shown, and audiences of 600 are by no means uncommon. Local cinemas are sometimes hired for a Sunday afternoon. More often it is in the town hall or community centre theatre in which the shows take place. In many cases local dignitaries give their patronage and introduce the programmes on the opening night.

The shows are publicised for weeks in advance. We supply gratis hundreds of attractive posters on which the sponsors overprint details of their own particular presentations. Last week I had occasion to drive through a London suburb. It was plastered with Ten Best posters—some the 'official' ones but many more produced by the sponsor to the same design but on a larger scale. The loudspeaker van which passed me urged me to remember the date and place of the presentations. As I stopped at the traffic lights, a handbill about them was thrust through the car window.

Had I gone to one of those shows I should have been offered a program. Thousands are printed and supplied to the sponsors at cost. But why bother with programs? For two reasons: to emphasize that the show is an occasion and to introduce it to an audience who may never have seen an amateur film in their lives before.

Here is an extract from the foreword to this year's program:

> "Some of the members of this audience will probably have attended amateur dramatic performances, and certainly everyone knows of the existence of amateur dramatic societies. But not everyone will be aware of the fact that there is a thriving amateur film movement in this country . . .
>
> There are many critics of the cinema who see in the individualistic methods of amateur film production a more fallow ground for the eventual blossoming of originality and sincerity. They regard the amateur film movement both as a nursery and as an innovator . . .
>
> A considerable proportion of the entries are family and holiday films—for most amateurs make their entry into the movement with films of this type, finding in these personal records, which faithfully capture mood and movement as well as scene, a pleasure

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infinitely greater than still snapshots can give. The spell of movie-making tightens its hold as experience grows, and the trend of subject-matter shifts from the personal to wider spheres: to film plays and expressions of cultural and civic awareness in the shape of documentary, instructional and educational films. Many such productions have met with notable success, the significance of the amateur's contribution to films becoming more widely recognized each year."

Then follow short biographical details about the producers which might be expected to interest the general public—that the maker of this film is a barrister, that one an advertising designer, another an engineer, a fourth a Ceylonese journalist. And in the centre spread there are frame enlargements from some of the films.

Undignified ballyhoo? Ballyhoo, I suppose, but not—I think—undignified. Doesn't the professional film industry do the same for the same reasons? I'm not one of those folks who affect supercilious contempt for publicity antics; I have a soft spot even for naivety if it springs from sincerity and a genuine love of films.

Of course, the inevitable result of all this is that the films are elevated to a height which their merits cannot always sustain, and that, I agree, is a bad thing for the film producer, whether prize-winner or also-ran, for it makes for false standards. But I try to counter-act

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to it by faithfully publishing adverse as well as favorable criticism of the films. And on no occasion have we attempted to 'sell' the films (no charge is made for them) by intentional over-emphasis on their virtues.

In fact, the public is no more easily 'sold' over amateur films than it is over the professional. It is not satisfied with their novelty alone. But that we were right in thinking that there *is* a large audience for them is indicated by the fact that the Ten Best shows have inspired the production of a professionally-made film which has been released to the public cinemas.

After one show I received a telephone call from a professional producer of shorts. When could we have a talk? He had an important proposition to make. He had gone to see the show out of idle curosity—it was a wet evening and the publicity had enticed him in—but he stayed to be impressed. The upshot of our talk was the making of a 25-minute 35mm film consisting of stretch-printed extracts from the Ten Best, linked together with a commentary outlining the aims and objects of the British amateur film movement. *Filming For Fun*, as it is called, received a high rating from the trade critics and must have gained many adherents for amateur cinematography.

It might be supposed that large-scale shows of this kind would militate against the production of the personal film which is the backbone of the movement. But this is not the case. Indeed, the films which have gained most favor with the general public have been those centered around family life. This has surprised the amateur, but there are signs that the evidence of the popularity polls is weaning him away from slavish unimaginative apeing of Hollywood to a better appreciation of the real role and function of the amateur film.

One of last year's prizewinners, which was included in the Traveling Ten Best Show, was an idyllic little piece about a small boy who set out with his dog to post a letter but returned home with the letter still in his pocket. There were so many things to distract him: a train going by, wheat being harvested, losing and finding the dog. The amateur found the absence of obvious technical adroitness hard to stomach, and the slenderness of the theme seemed to him to be a serious drawback in a prizewinning film. One critic wrote that one could understand an amateur building such a picture around his own child, but that anyone should invent the situation for someone else's child, and be commended for doing so, passed comprehension.

But the general public who knew nothing about the problems of amateur film production and were able to accept the films at their face value, expressed the most cordial approval, as, too, did the professional critic. Several people took the trouble to write and say they found the film quite enchanting. Many more have written to ask how they, too, can make their own films; and few clubs who have sponsored shows have failed to add to their membership. Further, there are few clubs who have not made a profit on them. One group was able to buy a sound projector from the proceeds.

The magnet of nation-wide audiences attracts an increasingly large entry for the competition, the public is made aware of amateur films, and the film producer is afforded the opportunity of seeing what his fellows are doing. Also—and this is the crux of the matter—he is encouraged to undergo the discipline, necessary in any artistic endeavor, required for the production of work which shall appeal beyond his own narrow circle. He is encouraged to make *films* as distinct from exercises in technique for the delight of the *cognoscenti*.

There is, of course, still a long way to go, but at least a highly successful start has been made. That it should have been possible to make it at all lies to a great extent in the fact that there are a sufficient number of progressive clubs able to sponsor the presentations.

And here we come back to Alvin Roe's thesis. Organization is necessary; but there must also be organization for showing the results of it.

SET LIGHTING BY REMOTE CONTROL

(*Continued from Page 445*)

Paramount Studio has had completed a total of eighty 5-KW seniors and one-hundred 2-KW juniors. By employing thin (.020") duralumin and a new type deep-fold accordion outer sheel both lamps have been made considerably lighter and at the same time much more efficient as a heat radiator, resulting in cooler bulb temperatures. According to the Studio's engineers, the radiation-type cooling of the new lamps has proved far superior to the old-type lamp with its convection (air) cooled lamp house. By actual test, lamp life is increased instead of reduced because heat distribution within the new-type lamp is uniform.

The studio presently is building for the system several 10-KW units, but development of larger 25-KW and 30-KW units must await availability of suitable incandescent bulbs.

The device that automatically moves the lamp and adjusts the beam spread, as previously mentioned, is called a Bail. This is a separate unit to which the lamp is attached by means of a quick-demountable "Dzus" fastener. The Bail, which is shown in Fig. 4, incorporates three small, 24-volt split-field resversible motors, which originally were designed for aircraft use. Referring to the illustration: motor 1 controls the lamp tilting action; motor 2 controls the beam spread; and motor 3, the rotation of the lamp.

The Bail is mounted on a Remote Lamp Control box, shown at 4 in Fig. 4. This box contains a bi-direction Ledex rotary solenoid selector switch. A red jewel or "bullseye" located on front of the box indicates, when lit, that the box and its respective bail and lamp have been switched into the power circuit, ready for use. At the rear of the box are two sturdy C-clamps by which the box is mounted on a 2-by-12 above the set.

Remote control of the light units is accomplished from the floor through manual operation of the simple Master Control, (Figs. 1 and 2). Two hand-controls and six pushbuttons on the Master Control panel afford the range of manipulation of the lamps previously described. The unit resembles a conventional ash-tray stand, having a circular base and a column which supports the Control Panel. Made of aluminum, its light weight makes it easy to move about on the stage or set. A multiple cable connects the Master Control panel with the Group Control Panel from which cables lead controlling the lamps and their respective Bails.

The central hand-control on the Master Control Panel consists of a "wobble-bar" Micro-switch actuator, which works similarly to the joy stick on early airplanes to secure up-down and right-

ADV.

"To Hell with my mink coat — save my KINEVOX*"!!

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left control. Additionally, there is a rotary lamp-selector wheel, on-off push-buttons, and spot-flood beam control buttons.

In operation, the lamp selector switch sends electric pulses along the interconnecting series of cables to the remote control box of the lamp units (4 in Fig. 4). Selector switches within the respective lamp control boxes progressively connect the actuators in the various lamps to the control buss wires, which extend throughout the circuit. In this operation, the red bullseye lights up, as the selector switch makes contact with the circuit. Thus, if control of a specific lamp is desired, the lamp selector dial is rotated clockwise or counter clockwise until the bullseye on the desired lamp control box lights up. This stage of the operation does not light the set lamp, but merely switches it into the circuit, ready for lighting—which the illuminated red bullseye indicates. Lighting the lamp is then accomplished by pressing the "on" button on the Master Control panel.

Through the master control on the floor, any number or combination of overhead lamps may be operated. A number of lamps may be grouped so as to be controlled in gangs, and the groupings integrated into the complete lighting plan for the set by means of the Group Control Panel, shown in Fig. 3.

The function of the Group Control Panel is to provide automatic on-off control of lamps in groups—with each group consisting of not more than four 10-KW, eight 5-KW, or twenty-two 2-KW lamps. The maximum number of lamp groups that can be controlled by any one Group Control Panel is eight. Referring again to the illustration (Fig. 3), two rows of bullseyes will be seen over the row of numerals 1 to 9. Those in the top row are white, while those in the bottom row are blue. These are indicators which show which lamps are lit, or are ready to light. As the selector dial on the Master Control is turned, the lamp circuit thus automatically pulsed or made ready to light is indicated by the illumination of its respective blue bullseye. When the circuit is switched to "on" at the Master Control, the white bullseye above the corresponding numeral lights and remains on for the duration the lamp or group of lamps in the circuit are lit.

In short, the Group Control Panel serves to indicate to the operator of the Remote Control which set lamps or group of set lamps are on or off; also, it permits the operator to pre-select *for lighting* any desired group of lamps (grouped at the time of rigging) by merely turning the selector wheel until its corresponding blue bullseye lights

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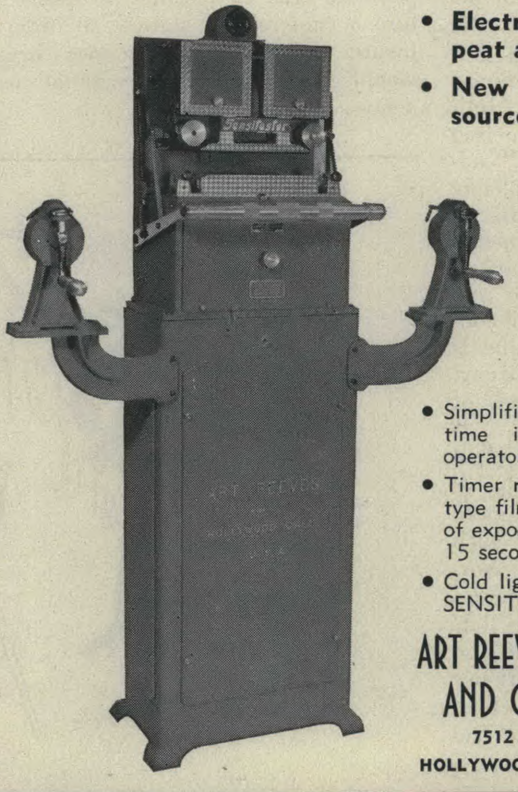

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up—making it unnecessary to first light the lamps on the set.

In demonstrating the lamps and the remote control system before members of the American Society of Cinematographers recently, Loren Ryder said: "We do not believe this is the ultimate in our development of these lamps, and we are eager to have other studios undertake developments along similar paths with the hope that ultimately a truly time-saving remote control incandescent lighting system will be developed for universal acceptance by the major studios."

Perhaps the most pertinent criticism of the system is that at present, with the lamp units mounted on a 2-by-12 above the set without benefit of an attendant gaffer, it is difficult to place diffusers, barn doors, etc., on the lamps.

This problem was recognized early by Ryder and his associates, and there is presently under construction a pilot model pantagraph arm for the lamps, which will allow lamp and its respective remote control bail to be moved anywhere within a fixed arc, or lowered momentarily into the set to permit addition of diffusion, barn doors, snoots, etc. Recent demonstrations of the equipment before technical groups have also brought forth some very valuable suggestions, which Paramount engineers will endeavor to develop and integrate with the system.

"We do not at present claim to have the complete answer to the problem of remote light-control," said Mr. Ryder, "largely because of the great variety of equipment such as screens, snoots, barn doors, gelatins, etc., which are normally used in present-day set lighting. It may be necessary ultimately to incorporate some or all of these facilities in the automatic remote control of the lamps."

While the basis for developing the system lies in the overall production economies it can effect, Ryder pointed out that the savings lie in speeding up production, rather than in the elimination of manpower.

Others who contributed in the development of this system are Charles A. Hisserich and Robert Devinney, of Paramount's Special Engineering and Electronics department and Dr. Charles A. Daily, optical engineer. **END.**

DOCUMENTING AN AIRLINE'S OPERATIONS

(*Continued from Page 452*)

for Metro-Goldwyn-Mayer. A total of almost 40,000 feet of 16mm Commercial Kodachrome was exposed to obtain the approximate 1,050 feet used in the final version.

The film tells the story of a few weeks in the life of a United Mainliner. Audiences are given an exciting, intimate tour of United's San Francisco maintenance base as the 46-ton "leading lady" enters the dock, is completely stripped of parts and then is reassembled, "better than new." The cameras went along on a flight test, too, to record the plane's altitude, range and engine performance; and a well-conceived sequence shows how a plane is brought through safely to the airport in "ceiling zero" weather by means of the Instrument Landing System.

Palmer's shooting script deviated from the usual motion picture script in that it allowed the director and camera crew to look for "added values," such as special angles, closeups, etc. Normally, a specific shooting script denies this freedom. The greater latitude thus allowed by the script enabled Cate and McGlone to utilize their best experience with airline and flight operations to a much greater degree than if they had been confined to a rigid scene-by-scene rendition of it.

Between the approval of the final story line and the editing of the film lay a vast amount of work. Step-by-step planning was an absolute necessity before a camera was started, in order to insure that production, once begun, would go along smoothly without costly delays.

In the early stages of the production, most of the shooting was on the ground —mostly at the San Francisco base. Here there were three major factors to consider: (1) it would not be possible to upset the complex planning which makes the San Francisco base operate on schedule; (2) the many problems of lighting large areas for 16mm Kodachrome; and, (3) scheduling each factory scene in logical tear-down and build-up sequence to conserve the time of mechanics, technicians, the overhaul dock, and the plane itself. The first two problems were solved during visits made to the base by Cate and McGlone prior to starting the production; the third was readily solved through careful scheduling of shooting and the use of arcs and a Hollywood lighting crew for fast set-ups at the scene of operations.

In order to shoot scenes successfully inside the sprawling 160-foot square dock, the producers brought in one of Hollywood's largest mobile motor generator outfits with a capacity of 4500 amps. Three thousand feet of heavy cable were laid to carry power from the generator to the lamps. Standard Hollywood studio lighting units provided the illumination. These included four "brutes," two "170's," six 50-amp. Duarcs and an assortment of incandescent lamps, including Colortrans.

As the plane was moved into the dock for its periodical inspection, McGlone, Al Stensvold and Les Helhena trained their lenses on the operation. One shot at a low side-angle, another from a high elevation, and the third had his camera set upon the ground outside the dock, shooting into the structure. Cameras used on this sequence were a 16mm

"He says no Betty Grable, no movies!"

Mitchell and two Cine Kodak Specials. With the excellent lighting setups, the cameramen were able to expose Commercial Kodachrome at f/2.5 at 16/f.p.s., using wide angle lenses; and at f/1.6 to f/2 using 1-inch lenses at 24 f.p.s. Although the scene runs only 20 seconds on the screen, it required a full hour to film.

Illumination provided for this scene was probably one of the most complex ever attempted for 16mm Kodachrome photography. The area, 160 feet by 160 feet, was lighted to a height of 35 feet—well above the DC-6's tail assembly. The area was so vast that communications between the various cameramen, electricians, and men handling movement of the plane made a portable public address system necessary. It was the careful attention given to such specific details in the pre-planning stage of the picture that enabled the producers to wind up shooting almost 9,000 feet at the base in five days.

After recording the re-assembly of the plane's inspected parts, the cameras then recorded its takeoff and flight to Denver, where additional sequences were filmed. These depicted important aspects of the Denver base. Here, United Air Lines' employees were given the glamour treatment with makeup and direction in acting, and made actors and actresses for a day.

A major consideration in commencing work on the film was that it be a factual documentation of actual airline operations. In the past, airlines treated the subject of bad weather with great caution, usually ignoring it completely in public statements. "United 6534" includes interesting sequences showing operations under adverse conditions such as minimum ceilings and visibility, and shows dramatically how United Air Lines solves such problems in an efficient manner.

For instance, when United's trip 608 from Hollywood takes off for New York, clouds are hanging low over the airport and the passengers board while rain drizzles steadily. Action then switches to the cockpit where pilot and crew are shown making an uneventful takeoff in the overcast through aid of instruments and direction from the control tower of the airport.

The ensuing flight to Chicago shows what the passengers see aboard such a flight from takeoff to landing: Hoover Dam, the Grand Canyon, the prairie states, etc.—all filmed during an actual flight from Denver to Chicago. Most of the action taking place within the plane, of course, was shot with the ship on the ground. Cables leading from the portable motor generator fed power to the studio lamps and the Colortrans mounted within the cabin, enabling the

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cameramen to achieve excellent lighting of the interior.

The arrival of the plane in Chicago in a snowstorm was one of the most difficult sequences encountered, although landing the plane on the snow-covered field was a routine instrument procedure. In a complete reversal of normal motion picture production, the camera crew *wanted* bad weather, and hoped the local meteorologist would predict snow and sleet conditions.

Four days later the production crew got what it had asked for — sleet and snow plus a strong wind. Cameraman McGlone hustled up a 30-foot steel tower on top of which a camera platform had been erected, and made ready for what had to be a "one-take" scene; because of the time of day and the ramp layout, only one specific plane arrival could be photographed, and that without benefit of rehearsal. The crew had set up a weather-proof tarpaulin to shield the camera from the high wind and driving snow. McGlone set his Ektar lens at f/2.8 and started shooting, hoping the flapping tarp would hold until he finished the shot. "United 6534" was picked up by the camera 500 feet from the ramp and followed as it proceeded to its gate, just 250 feet from the top of the camera tower. Remainder of shooting in Chicago consisted of shots of the servicing of the plane, and its takeoff for New York.

To get a different slant on the touchdown of the plane at New York, the producers conceived an "under belly" shot. Actually, this scene was filmed at the San Francisco maintenance base during test flights. A structure to hold the camera beneath the plane had to be engineered and constructed as compactly as possible to reduce head resistance in flight. There was also the problem of devising ways to protect the camera and its lenses from flying dust and gravel thrown up from the runway during takeoff and landing.

The proper angle at which to set the camera for the desired shot was worked out in advance by McGlone and one of the company engineers. Within a couple of days the rig was set to go into operation. Wind and runway conditions dictated a backlighted shot, so the lens was set at f/8, which McGlone figured would be the norm to take care of the range of changing light values as the plane lifted, climbed and turned.

Operation of the camera was by remote control from inside the cabin. By carefully timing camera operation in coordination with the test pilot's operation of the plane, it was possible to secure one take-off, several feet of cruising action, and one landing scene per flight. The scope of the filming during each flight was severely limited because of the 100-foot supply of film in the camera—the only loading that could be used because of the restriction of space. For these shots, regular Kodachrome was used instead of Commercial, permitting the matte box and filters to be eliminated from the camera.

The excellent editing job on the film is the work of James Algar, whose editing of Disney's "Beaver Valley" and "Seal Island" contributed much toward Disney's winning Academy Awards for these pictures.

At no time was any lip-sync sound recorded for the picture. The picture is accompanied by excellent narration in the voice of James Matthews, and what "lip-sync" sound is used was post-recorded.

"Filming of 'United 6534' required the cooperation of United Air Line employees all across the Main Line," said McGlone. "Step-by-step pre-planning of all scenes permitted shooting without interruption of regular work schedules. Cabin and cockpit scenes were filmed at the Douglas Aircraft Company's plant in Santa Monica.

An estimated one hundred and sixty prints of "United 6534" are to be made immediately available, following completion of previews in New York, Chicago, and 14 other major cities on the itinerary of United's sales officials making the initial presentations. END.

TV SPOT FILMS

(*Continued from Page 454*)

Where the job is a "rush" and only one print is required, 16mm reversal film often will suffice. If the job is small, and has to be made cheap, then 16mm negative-positive is the best plan to follow. But whatever the gauge of film to be used, camera problems remain much the same, unless the job demands optical effects. In some localities, special effects on 16mm film are more difficult to obtain than in some film production centers, such as Hollywood and New York.

As a rule, the advertising agency contract will call for a union cameraman, and union crews in all the stages of production. This means that it will also be necessary to pay current union rates to the artists as well—even though they have only walk-on parts. Many a film producer has run into trouble paring his talent costs too closely. Another point to remember is that many popular models, artists and narrators no longer accept assignments at current Guild rates; as demand for their services increases, their rates usually increase proportionately.

An essential guide to planning sets and to making camera setups with a minimum of time expenditure is a carefully prepared list of the things required for each scene. The mimeographed form titled "Television Production Requirements" used by the author for this purpose is shown at B in the illustration. By checking over this estimate form with the agency account executive or with the client, it is often possible to pick up additional information with respect to the product uses or its handling, all of which will lead to more effective presentation in the filming. The procedure also will insure that everything necessary for the scene or scenes is on hand when the camera starts to roll. There is nothing more annoying, time-consuming — or "face-losing"—than commencing to shoot in the studio (with account executives, copy writers, etc., getting in your hair as they will!) and discovering suddenly that the jar of face cream—the sponsor's product—has not yet arrived from the agency, or perhaps that the only one available has not received the special label touch-up necessary for good camera pickup, and consequently best rendition on the TV screen.

The "Production Requirements" form also should show what the actors should wear, if special costuming is required, and such important details as "clear" or "no nail polish," etc. It's the little things such as these that are important in making a commercial spot announcement film. Distracting nail polish on fingers holding a sponsor's product detract—take the audience's eyes off the product and make it less effective. In other cases, having such data immediately at hand, such as type of hairdress, etc., can reduce or eliminate entirely the headaches that otherwise might result from a loosely-planned production.

From the point of the photography, extreme care must be given the preparation of the sponsor's product, if it is packaged, in order that the product name or label photographs clearly and legibly. Because many TV screens are yet small, small type must be avoided. For this reason, it is the usual practice to have an artist do a touch-up job on the label—simplifying it if it contains too much copy (reading matter), eliminating all but the trade mark or product name. Also, where colors of the ink in the label are apt to register with too little contrast, this text is usually worked over in blacks and contrasting greys by the artist in order to render a sharp image on the film and eventually on the TV screen.

Products packed in jars thus must come in for considerable attention before the camera is trained upon them. If the container is black or of any dark color, then the label should be light with black lettering; a light colored jar should have a label with dark background and the lettering white. If the client or the agency has failed to take care of this, then it becomes a cost item to be included in your estimate—or final billing.

The film stock used in the camera has a bearing on the ultimate results, of course. On the east coast, most of the TV film producers use DuPont Superior 2 or Eastman Super-X.

The camera and associated equipment requirements for the production of TV spot announcements invariably is as great as for shooting dramatic films for television. Indeed, with spot announcements, there is greater demand made upon the cameraman for the production of trick effects in the camera, and for this reason he must be prepared to provide zoom shots, dolly shots, tracking shots, and a wide variety of angle shots and lens effects. He must therefore have a wide assortment of lenses at his disposal, and a camera dolly and crane with suitable tracks to insure smooth action when this equipment is used. All this must be carefully considered when analyzing a production prior to submitting estimates.

As with the best dramatic-film photography, the spot ad films also demand top lighting. Lamps and lighting accessories therefore must include floods, spots, and an array of gobos, flags, etc.

Even though most spot announcements are staged against a single flat, simply decorated or tinted, it is the lighting that invarably makes or breaks the photography of such films. Because most shots are closeups, the lighting must be carefully applied; and because the pictorial result that eventually reaches the home TV receiver depends so much on just the right placement of light and dark areas and in the proper balance between the two, composition demands more than ordinary attention of the cameraman.

More about this next month.

REFLECTED LIGHT

(*Continued from Page 447*)

flood lamps which are mounted on either side. This lamp is pictured in Fig. 7.

The fifth unit (Fig. 2) so far completed in the series is perhaps the most radical in design and application. Dubbed the "Skylite," it comprises three corrugated aluminum panels, which are painted flat white. The center panel is the larger of the three, the side panels at either side being somewhat narrower and set at a slight angle to concentrate the reflection of light. Area of the reflector is approximately 8 by 6 feet. In front of the tri-panel reflector is a wooden framework which includes two vertical members, each mounted with five No. R-2 photoflood lamps. These throw light toward the reflector and thence toward the set. The photofloods are controlled individually or in gangs, permitting varying the intensity of the light.

The prototype of this lamp has been widely used by George Folsey in photographing his current MGM assignment, *Lovely To Look At,* and by Charles Rosher, A.S.C., in shooting the vast theatre interiors for MGM's *Scaramouche*. The unit, normally used suspended above the set, is pictured in use on the *Scaramouche* set in Fig. 1. A smaller model of the same design, measuring 4 by 3 feet, has been completed and currently is being tested with the view toward constructing a number of them for general use in all future set lighting.

The Motion Picture Research Council is said to have become interested in this latter unit, and working closely with John Arnold in designing and testing the equipment.

Altogether thus far, the lighting units have been used extensively in photographing five MGM feature films: *The Law And The Lady, Lovely To Look At, Scaramouche,* and *Rain, Rain Go Away,* which were previously mentioned, and *The Belle Of New York.* All but the first named are Technicolor productions.

MGM's new reflected-light set lighting lamps are not intended as "a new lamp to do away with all other types of lamps." Rather, they are the result of a specific lighting need, and they have proved to be the type of light to fill this need.

They can be—and indeed are being—integrated with other types of set lighting units, both incandescent and arc.

Following further tests and use in actual production, it is likely that MGM, through the Motion Picture Research Council will introduce the lights in other motion picture studios.

That the premise on which they are designed is sound has, of course, already been proved in actual production. Today, a method of set lighting which began at MGM by the simple process of throwing a strong light on a white cloth screen suspended above the set—thus to be reflected down on the set—has evolved into a more practical method wherein the lighting source takes the same physical form as conventional set lighting equipment, and has the same rugged, portable, easy-to-use features.

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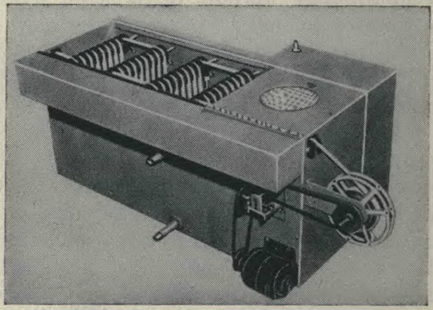

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TELEFILM, INC.

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ANIMATION WITH PUPPETS

(*Continued from Page 460*)

this permitted the building of miniature sets on a small table, enabling the whole production to be made within a limited space set aside in a little-used room.

If you decide to make your own puppets, remember to construct them as light as possible. In so doing, you will be able to set them in almost any position without danger of toppling over. The puppets should be properly balanced, too, with the heaviest weight in the feet. Construction of the feet is important and is a feature which should be given special attention, because on this depends the ability to move the puppets through a cycle of action smoothly and without encountering trouble in having them move or fall right in the middle of a shot. One method is to make the feet of soft, pliable clay that will stick to the table or base on which the action is staged. Another—which is used by many professionals—is to fit sharp pins, such as phonograph needles, into soles of the puppets' feet or shoes so that the feet may be set in any desired position merely by pressing the sharp pin into the table or stage floor. For the latter, it is advisable to use a panel of Celotex wall board. Using this method, you will be able to obtain smoother action in a walking or running sequence because you will be able to break up the action into a greater number of intermediate positions of the puppet's arms, legs and body—all because the puppet can be made more secure to the working surface.

In constructing the various body members for a puppet, balsa wood is ideal. It is soft, light weight, and easy to carve—even by amateurs. The wood is easily painted, too. Puppets should be constructed with the utmost flexibility in mind; therefore, the various body members should be connected by some flexible medium and for this I found copper wire or pipe cleaners ideal. Instead of drilling holes in the balsa wood and twisting wires, a better method is to drive the wire into the body member and secure it with glue or plastic cement. This makes a cleaner job and will provide easier manipulation of the puppets.

If you are hesitant about undertaking the construction of puppets, you can experiment first with ready-made figures such as story-book dolls, and jointed figures such as "Krazy Ikes" which may be constructed from an assortment of wooden units that are available at most department store toy counters. These jointed wooden figures can be assembled and arranged in various positions like Tinkertoys. Plasticine, a non-drying clay, can also be used to advantage for modeling puppets' heads, hands and feet. However it tends to "wilt" when subjected to heat of photo lamps for any great length of time.

Costuming of puppets can be an interesting undertaking — one usually turned over to the woman of the house. Cloth scraps or remnants, beads, lace, etc., are usually to be found in the home sewing basket and are an ideal source of materials for puppet wardrobes.

The quality and character of sets need only be limited by available time and the ingenuity of the builder. Cardboard boxes can form the basic structure of most settings, and vari-colored strips of construction paper can be placed to achieve the effect of stone, brick, boards and shingles, etc. Aging can be achieved by brushing the whole with shellac. Landscaping touches can be accomplished through use of twigs, bits of colored sponge for the foliage, and green paint. Trees, shrubs, etc., should be made with their own individual bases so that they may be moved about, and set securely in place as needed.

The December issue of American Cinematographer will carry a complete index listing titles and subjects of all articles published during 1951.

Illumination of such sets is ordinarily very simple. One or two photolamps in reflectors usually suffice. In addition to these, I have employed mirrors to throw sharp light through windows and the light from a slide projector for spotlight effects. Such things are generally worked out by the filmer as the occasion demands.

When we speak of animation, we mean the photography of motion by single frame exposure, and this is accomplished with any motion picture camera with a single frame exposure release. Cameras which do not have this feature can also be employed. This requires a little practice in operating the starting button. The camera motor is allowed to run down completely, then wound just a few turns. With motor tension thus reduced, it usually is possible to operate the shutter for a single exposure by merely "flicking" the starting button. The amount of pressure to be exerted on the button varies with different make cameras.

In the beginning, some thought must be given to tempo of the action and how to achieve it. Generally there is the tendency of the beginner to move the puppets too much between each exposure. It should be remembered that the greater the number of single-frame exposures in a given action cycle, the smoother will be the action. For example, an action cycle, such as the movement of an arm, filmed in five single-frame exposures will be jerky compared to the same action filmed in ten.

To determine how many frames to devote to any action cycle, take a strip of regular motion picture film containing similar action (you can shoot it especially for this purpose) and count the number of frames required to complete the action; then use this as a basis for photographing like action by puppets in single-frame exposures. In this way you will gain the approximate effect of live action.

You can also run through the same action yourself in a "dry run" and time it with a stop watch. It then becomes a simple matter to multiply the number of seconds by 16 or 24, as the case may be, depending on whether you intend to shoot your picture at silent or sound speed. The result of this multiplication will indicate what fraction of the total movement must be allotted each individual frame in stop motion.

You will sometimes encounter some type of action that is so slow that it is impractical to move the puppets between each frame. In such cases it is better to expose several frames of each interval, instead of a single frame, but move the figure the same amount as in normal action. This technique gives good results if not done to extreme; the resultant action on the screen is a little rough, but is acceptable in most instances.

Many spectacular trick effects are possible in the animation of puppets. One which I used with marked effect in *One Summer Day* employed the use of mirrors to multiply my characters and at the same time enhance dance numbers, which were an important feature of the film. The pictorial result and the method of staging such action is to be seen in accompanying photos.

In making plans for an animated puppet film venture, the limitations of the medium must be kept in mind. While lavish sets and quaint, colorful characters are of its essence, some seemingly trivial actions can pose real problems. For instance, I had to abandon the seemingly simple bit of action showing puppet pirates burying treasure on a sandy beach, simply because I failed to work out a method for keeping the figures steady in the sand. Perhaps if I had resorted to the pin method described earlier, this could have been surmounted.

Actually, few situations are impossible to overcome, if you put your mind to it and have the imagination to work out problems as they arise. There is incentive in the anticipation of seeing the finally photographed picture because, unlike in shooting live action, there is no real "action" until the film is screened. It is then that careful preplanning and infinite patience pays off with thrilling action that is entirely new. In animation, the very action is creative.

QUO VADIS

(*Continued from Page 448*)

tions which drove us half crazy. All this took place in spite of our precautions to check and double-check every piece of electrical equipment. We had even gone through "dress rehearsals" for several days before we started shooting, practicing lighting sets, etc. The sound department was having its troubles, too, and Bob Lee and his Italian engineer, Piero Cavazutti, were to be seen running around with all sorts of meters and testing equipment, checking voltages, etc. Things got to the point where we technicians were, frankly, stopped.

If conditions looked bad to crew members, it must have looked absolutely devastating to the executives of the production staff. Things got so bad there were rumors of calling off the production and abandoning it. A general meeting was called in Rome by E. J. Mannix and Henry Henigson, where some very helpful suggestions were made; it was felt that most of our trouble thus far was due to bad breaks; that Italian crewmen were developing rapidly in efficiency; and that our pace would materially increase with each day's work. The best we could do was hope for an end to mechanical breakdowns.

By the close of the ensuing fourth day, we began to see the end of our troubles; by six p.m. we had fourteen set-ups in the bag. From this time on, things went smoothly in the technical end, and we breathed easier.

Once the idea of this great picture began to impress itself in the minds of all taking part in its production, there seemed to be an almost super-human effort to assure its completion as well as to ease the way for those responsible for the important phases of its making. The religious aspect of the story did a great deal to engender this feeling. To me, the very fact we were working and living in Rome itself meant a great deal. Rome and Romans always had seemed so remote, so vague; now, here we were, working among the ruins, the tombs, market places, and the temples of those people we had come to know vaguely through our history books.

We were shooting scenes in the actual locales where Peter had been crucified, and where St. Paul had been beheaded. This had a profound effect on all of us. And working daily with people dressed in early-day Roman costumes, depicting the history of Christianity, made us realize we were accomplishing real good in bringing *Quo Vadis* to the screen. Yes, there is hardly a doubt that the Romans and Christianity became very close to us all working in Rome during those torrid summer days of the Holy Year—1950.

Our daily takes were sent to the Technicolor Laboratory in London, where two prints of the results were made up. One print was sent to us in Rome, and the other to Mr. Dore Schary in Hollywood. The lab results were wonderful, and the prompt service enabled us to pick up any retakes and added shots without undue delay.

The standard basis for exposure of Technicolor film, established by Technicolor's London lab, is 750 foot candles at a stop of T-1.2. The new low-level Technicolor film was not yet available to us, so we used the standard Technicolor film throughout the production. During the production shooting, we varied our exposure according to the screen effect desired. In order to gain depth of focus in several sequences, we worked with light as high as 5,000 foot candles. During the extreme light effect for the scene depicting the death of Nero, we worked at a light level of only 150 foot candles.

Always keeping in mind the beauty of the costumes designed so magnificently by Herschel McCoy, I planned our camera set-ups with the idea of letting costume colors and the simplicity of Horning's sets carry the photography. Never was the lighting allowed to intrude. Because I felt that the entire film should be on the warm, rich side, all backlights were filtered slightly amber. This idea was carried throughout the picture, but at no time did the lighting on the colorful costumes and sets fall below the color temperature level required to render faithful reproduction on the screen. This is not to say that we "flat-lighted" everything. Perfect color rendition can be secured even in extreme effect shots if light units are used on principal set objects such as draperies, etc.—and providing light is kept from splashing over on other parts of the set.

In the set of Nero's Throne Room, we strived to get an almost shadowless effect. This entailed hanging fifty-foot

(*Continued on Page 475*)

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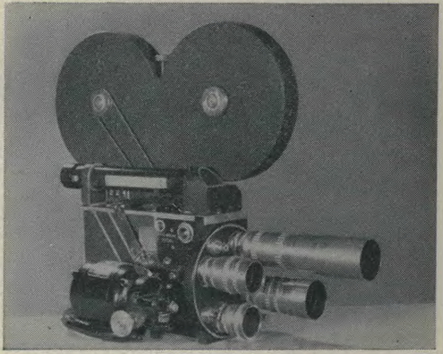

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Current Assignments of A.S.C. Members

Major film productions on which members of the American Society of Cinematographers were engaged as directors of photography during the past month.

Columbia

- Hal Mohr, "Fourposter," with Rex Harrison, Lilli Palmer. Irving Reis, director.
- Joseph Walker, "The Marrying Kind," with Judy Holliday. George Cukor, director.
- Charles Lawton, "The Mother," with Loretta Young. Rudy Mate, director.
- Burnett Guffey, "The Sniper," with Adolphe Menjou, Marie Windsor. Edward Dmytryk, director.
- Guy Roe, "My Six Convicts," with John Beal, Millard Mitchell. Hugo Fregonese, director.
- Henry Freulich, "Okinawa," with Pat O'Brien. Leigh Jackson, director.
- Lester White, "The Harem Girl," with Joan Davis, Arthur Blake and Peggy Castle. Edward Bernds, director.
- Fayte Browne, "Laramie Mountains," with Charles Starrett and Smiley Burnette. Ray Nazarro, director.

Independent

- Floyd Crosby, "High Noon," with Gary Cooper, Thomas Mitchell and Katy Jurado. Fred Zinnemann, director.
- Lee Garmes, "The Tightrope," (Aspen Prod.-UA) with John Forsyth, Harold J. Kennedy, Geraldine Hall. Robert Wise, director.
- Joseph Biroc, "Without Warning," (Allart Prod.) with Adam Williams, Mag Randall. Arnold Laven, director.
- Ernest Laszlo, "The Lady In The Iron Mask", (Color) with Louis Hayward, Patricia Medina and Alan Hale, Jr. Ralph Murphy, director.

M-G-M

- Charles Rosher, "Scaramouche," with Stewart Granger, Eleanor Parker. George Sidney, director.
- William Mellor, "Skirts Ahoy," with Esther Williams, Joan Evans. Sidney Lanfield, director.
- Joseph Ruttenberg, "Young Man In A Hurry," with Glenn Ford and Ruth Roman. Mitchell Leisen, director.
- Harold Rosson, "Singin' In The Rain," with Gene Kelly, Debbie Reynolds. Gene Kelly and Stanley Donen, directors.
- Ray June, "The Invitation," with Dorothy McGuire and Van Johnson. Gottfried Reinhardt, director.
- Robert Surtees, "The Merry Widow," (Technicolor) with Lana Turner. Curtis Bernhardt, director.
- George Folsey, "Lovely To Look At," with Kathryn Grayson, Red Skelton. Mervyn LeRoy, director.

Monogram

- Harry C. Neumann, "Wagons West," (Color) with Rod Cameron, Peggie Castle, and Noah Berry, Jr. Ford Beebe, director.
- Ernest Miller, "Whip Law," with Whip Wilson, Fuzzy Knight, and Lois Hall. Howard Bretherton, director.
- William Sickner, "Starlight Canyon," with Wayne Morris and Anthony Caruso. George Blair, director.

AMERICAN SOCIETY OF CINEMATOGRAPHERS

FOUNDED January 8, 1919, The American Society of Cinematographers is composed of the leading directors of photography in the Hollywood motion picture studios. Its membership also includes nonresident cinematographers and cinematographers in foreign lands. Membership is by invitation only.

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Paramount

- George Barnes, "Somebody Loves Me," (Technicolor) with Betty Hutton. Irving Brecher, director.
- Daniel Fapp, "Sailor Beware," with Dean Martin, Jerry Lewis. Hal Walker, director.
- Loyal Griggs, "Shane," (Color) with Alan Ladd, Jean Arthur, Van Heflin. George Stevens, producer-director.
- Lionel W. Lindon, "This Is Dynamite," with William Holden, Alexis Smith and Edmond O'Brien. William Dieterle, director.
- Charles Lang, "Los Alamos," with Gene Barry, Lydia Clark, Nancy Gates. Jerry Hopper, director.
- George Barnes, "Famous," (Color) with Bing Crosby, Jane Wyman, Ethel Barrymore. Elliot Nugent, director.

R.K.O.

- Russell Harlan, "The Big Sky," with Kirk Douglas. Howard Hawks, director.
- William Snyder, "The Korean Story," with Robert Mitchum. Tay Garnett, director.
- Harry Stradling, "Androcles And The Lion," with Jean Simmons, Victor Mature. Chester Erskine, director.
- Karl Struss, "Tarzan The Hunted," with Lex Barker, Dorothy Hart. Cyril Endfield,
- Nick Musuraca, "Clash By Night," (Wald-Krasna) with Barbara Stanwyck, Paul Douglas and Robert Ryan. Fritz Lang, director.

20th Century Fox

- Leon Shamroy, "Wait Till The Sun Shines, Nellie," (Color) with Jean Peters, David Wayne, Hugh Marlowe and Albert Dekker. Henry King, director.
- Arthur E. Arling, "The I Don't Care Girl," (Color) with Mitzi Gaynor, David Wayne, and Oscar Levant. Lloyd Bacon, director.
- Harry Jackson, "Way Of A Goucho," (Shooting in Argentina, in color) with Gene Tierney, Rory Calhoun, Richard Boone. Philip Dunne, director.
- Lucien Ballard, "Diplomatic Courier," with Tyrone Power and Patricia Neal. Henry Hathaway, director.
- Leon Shamroy, "The Girl Next Door," (Color) with June Haver, Dan Dailey, Dennis Day and Billy Gray. Richard Sale, director.

Universal-International

- Russell Metty, "The World In His Arms," with Gregory Peck, Ann Blyth. Raoul Walsh, director.
- Charles Boyle, "Steel Town," (Color) with Ann Sheridan, John Lund. George Sherwood, director.
- Cliff Stine, "Oh Money, Money," (Color) with Charles Coburn, Piper Laurie, Gigi Perreau and Rock Hudson. Douglas Sirk, director.
- Irving Glassberg, "Hear No Evil," with Toni Curtis, Jan Sterling, and Mona Freeman. Joseph Pevney, director.
- George Robinson, "Ma And Pa Kettle Go To Paris," with Marjorie Main, Percy Kilbride, Ray Collins, and Lori Nelson. Charles Lamont, director.

Warner Brothers

- Ed DuPar, "The Lion And The Horse," with Steve Cochran. Louis King, director
- Robert Burks, "Room For One More," with Cary Grant, Betsy Drake. Norman Taurog, director.
- Wilfrid Cline, "She's Working Her Way Through College," with Virginia Mayo, Ronald Reagan. Bruce Humberstone, director.
- Ted McCord, "This Woman Is Dangerous," with Joan Crawford. Felix Feist, director.
- Warren Lynch, "Retreat Hell!" with Frank Lovejoy, Richard Carlson. Joseph Lewis, director.
- John Seitz, "San Francisco Story," (Fidelity Prod.) with Joel McCrea, Yvonne DeCarlo, Sidney Blackmer and Onslow Stevens. Robert Parrish, director.

QUO VADIS

(*Continued from Page 473*)

square silks on one side of the set, from behind which we projected light from arcs. This gave us a soft illumination of 550 foot candles over the entire set. The result was an almost third-dimensional effect on costumes, players, and other objects within the scene.

As the picture progressed, the style of lighting was changed to meet the changing pace or mood of the picture. In filming all the interiors during the burning of Rome sequence, an effort was made to keep all highlights and "kickers" on the copper-toned side. For the sequence after the fire, sets were lighted entirely from the floor in order to achieve the dull, foreboding effect called for in the script. Then, as the time of Nero's death approaches, we began to start the real effect lighting. This was done in a progressive manner, becoming more and more effective until, during the Nero death scene, we actually achieved a photographic climax, too.

Generally speaking, the lighting of *Quo Vadis* was kept very simple. We tried to maintain a classic style, for any other type lighting on the settings of Roman villas, baths, etc., with their many columns and straight-line architecture, would have been in bad taste. Always, we strived to keep the camera and the lighting from "running away" with or stealing the scene.

William Skall, A.S.C., photographed, and Tony Mann directed the night scenes of the burning of Rome. For twenty-four nights they worked in the burning streets, among the thousand of screaming extras. It was a difficult assignment, and extremely well done. The photography of this sequence is one of the highlights of the picture.

Several important scenes called for background projection; but as we had no equipment for this, the scenes were accomplished by employing the "blue-backing" method introduced by Tom Howard, of MGM's London studio. His method of photographing and combining in the printing of background and foreground action is said to be the best in the industry. As an example of how this method was used to make a composite scene showing Robert Taylor driving a fast chariot, without having to do this from a travelling camera car, we made a running background shot in the same manner as we would for a normal background projection shot. Then Taylor, in a chariot, was placed before the camera, with a blue backing, brightly lit, behind him, and his action of driving the chariot was photographed.

Back in London, Tom Howard combined the two negatives in optical printing to achieve the pictorial effect desired. Those who have seen this footage on the screen marvel at the great depth of focus and quality achieved.

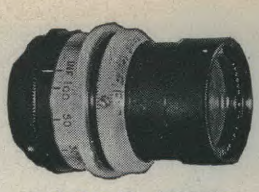
When lighting the blue backing for day foreground action, we achieved a smooth overall 750 foot candles; the secondary shot of the foreground action was then lighted for the same level. Where a night effect or low key effect was desired in a blue backing shot, the backing was lighted as for day shots, i.e., 750 foot candles, and the foreground action level was reduced to 400 foot candles. A register and definition chart was photographed before each take.

Recruiting and directing the tremendous crowds of extras that were used in the picture is a story in itself. Costuming and making up 14,000 extras was not child's play. Finding this many Italians and getting them on the set was the task of Mel Ballerino, sent over from Hollywood to supervise casting. There was no "Central Casting Bureau" in Rome to which Ballerino could telephone his requests for extras. So great was the picture's cast requirements that a large segment of the Italian population had to be recruited for the picture in a most novel way.

Italian motion pictures have been noted for their large mob scenes. Instead of central casting offices, there have come into existence in Rome men skilled at getting mobs of Italian people to work in films. These men are called "Capo Grupos" — group captains. To get mobs of extras for *Quo Vadis*, casting director Ballerino would contact the Capo Grupos, who would then canvass their neighborhoods or their lists, and round up the required number of people needed for the next day's shooting. It was the Capo Grupos' responsibility to see that their respective groups arrived at the set or location on time and ready to work.

The people under each Capo Grupo's jurisdiction were given a sleeve band to wear having an identifying mark. When preparing the extras for appearance in the mob scenes in Nero's Arena, our assistant directors had maps prepared showing the seating arrangement in the arena. Little markers with numbers had been placed in sections of the arena, and these sections were marked on the maps. Thus, each Capo Grupo would be given certain sections of the arena to fill, and he would direct his charges to the section marked with the numbers designated. It was a very efficient system, completely free of confusion.

When it came time to pay off the thousands of extras, the money was merely turned over to the Capo Grupos, who in turn paid off the people cap-



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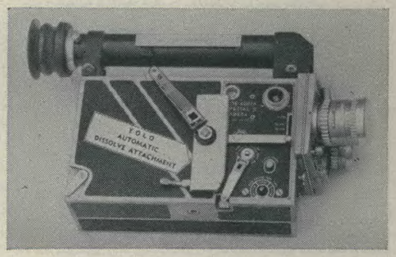

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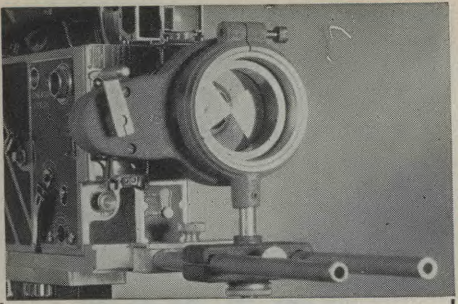

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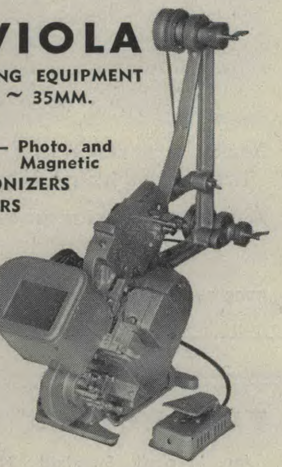

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tained by them. The fine cooperation of the "Capos" and people alike resulted in many wonderful scenes for *Quo Vadis.*

As I look back on this assignment, many humorous incidents come to mind. I have to laugh every time I think how we had to send most of Nero's Praetorian Guard to the barber shop each day for a shave. And then there was the situation that arose with the women dancers from the Rome Ballet. Before we could shoot the dance numbers in Nero's banquet scene, we had to send all forty of the women to the barber shop to get the hair shaved from under their arms. Italian women just don't believe in such things!

One day, when on location, members of the Italian electrical crew were about to go out on strike because the unit manager had substituted bottles of Coca-Cola for the customary wine in their lunch boxes. On still another day, one of the fighting bulls broke loose, and chased everybody on the lot indoors. Not until a squad of police arrived in a jeep and armed with machine guns, was the rambunctious bull quelled in hilarious action reminiscent of the old Keystone Comedies.

One day we noticed that the horses drawing Bob Taylor's chariot seemed to have changed color. After intensive questioning of their attendant, it was revealed he had substituted different horses. Someone had offered him more money for the use of the regular team in a private funeral procession scheduled for that day!

These are just some of the lighter moments in the making of a truly great production — a production concerned with the teachings of a man who taught goodness and mercy and who was crucified almost two thousand years ago. It is a timely production, one that should create considerable serious thought among mankind everywhere, in view of present world conditions. It should bring renewed hope and faith to people the world over. I consider it an honor to have photographed it.

DUAL-PURPOSE PROJECTOR

(*Continued from Page 450*)

coated 16mm film, which is now commercially available. With this development, and that of the RCA projector, the task of recording magnetic sound on 16mm film can now be performed by the layman, as well as the laboratory.

One particular advantage of magnetic recording on 16mm film is that sound can be added to the film either before or after it has been processed for picture. This permits flexibility of editing the picture part of the film before sound is added to it. Approximate lip-synchronization can be obtained easily with a few trials.

The cost of producing sound on 16mm film with this multi-use projector has been estimated to be about one-third the cost of achieving comparable results with optical sound. In addition, film waste due to recording errors is eliminated, because the magnetic track may be erased when necessary and re-recorded.

Reeves Soundcraft Corp., New York City, N. Y., and its various affiliates, including Ryder 16mm Services in Hollywood, are providing the edge-coating service which puts the sound track in the form of a permanent stripe of magnetic oxide 1/10 of an inch in width on one edge of the film, ready for recording. Position of the track is the same as would be an optically printed sound track. Such tracks will successfully record and reproduce sound at a frequency range of 80 to 7200 cycles with excellent quality and with virtually no background noise. The cost for striping film is said to be in the neighborhood of 3½ cents per foot.

The RCA "400" projector has been engineered to accommodate the component parts required for recording and reproducing magnetic sound, without altering in any way the characteristic simplicity of its threading. The optical sound track reproducing facilities are retained in the RCA "400" projector, making it the first commercially-produced projector which will play back either optical or magnetic sound tracks.

For recording and reproducing magnetic sound, a very small record-play combination head has been mounted inside the sound drum (Fig. 4), and the erase head has been mounted just ahead of the upper sprocket, as shown in Fig. 1. The location of the record-play head inside the sound drum offers several advantages over any other location—primarily because it permits constancy of film motion, and also because it makes possible the same 26-frame spacing from sound to picture that is standard for photographic (optical) track.

In the RCA "400" magnetic projector, good physical contact between film and head has been obtained, consistent with low head wear and low film deformation. The head is mounted on the free end of a hinged, spring-loaded arm, which also automatically compensates for head wear.

The erase head, shown in Fig. 2, also has been mounted on a hinged arm, but for a different purpose. One of the problems presented in magnetic recording has been the possibility of unintentional erasure of the magnetically recorded signal. Thus the projector has

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been provided with interference between the rewind lever and the erase head. Before film can be rewound, the erase head must be removed from the path of film travel before the rewind lever can be thrown into operating position.

The special 10-watt amplifier of the RCA "400" magnetic projector has been designed to meet all the performance requirements for recording, reproducing, and erasing sound on the magnetic film.

To record sound for a reel of processed and edited 16mm motion pictures, the reel first must be sent to Reeves Soundcraft Corp., Ryder 16mm Services, or any agency offering edge-coating service, for the purpose of having the magnetic oxide stripe applied to the edge of the film. This can be applied to either 16mm silent or sound film. On single perforated film, the magnetic oxide stripe, 100 mils in width, is applied on the base side of the film in the same area normally occupied by the optical track. With double perforated or silent 16mm film, the track is narrower—40 mils in width—and is applied between the sprocket holes and edge of the film—on the normal sound track edge. At present, there is some possibility of sprocket-hole noise, where double perforated film is used, but this is being overcome in the improved design of the newer model RCA "400" projectors now in production.

In addition to the sound track stripe, a "balancing" stripe, narrower in width, is also applied along the edge of the opposite side of the film to equalize the thickness of film windings on reels.

Films submitted for this service should, of course, be securely spliced. The slight surface irregularities caused by splices do not affect the coating process, nor the results in recording and playback.

After the film has been striped or edge-coated, it is then threaded in the projector for recording. Normally, such recording consists of narration, but sound effects and background music may also be integrated with speech providing same can be recorded simultaneously through the recording microphone.

The uses RCA "400" equipment open up are many and varied. For example, a narrative or commentary can quickly be applied to any previously-made film. The same picture can be presented with two or more different sound tracks, each suited to a particular application, location or type of audience. The preparation of a single subject in several different languages or dialects can be quickly and expertly accomplished, by recording in the desired language on separate prints of the film.

BULLETIN BOARD

(*Continued from Page 438*)

—carrying the dialogue. Dual sound track films will also play on any existing theatre equipment interchangeably with present prints. New system is said to cut costs of foreign version prints 50 to 60 per cent, and as a result, make possible wider release of color pictures overseas because of savings in the dubbing end.

•

Al Gilks, A.S.C., thought he had landed another winner (Al landed the choice filming assignment of *American in Paris* at MGM) when he caught a giant salmon on the Klamath river during his recent visit there, and lost it when light tackle and No. 6 fly he was using parted during fight to land the prize.

•

Society of Motion Picture and Television Engineers held a special dinner meeting in Hollywood, October 31, in recognition of three distinguished visitors to recent SMPTE convention. Honored were Paul C. Foote, chief optical engineer, Bell & Howell Co.; Arthur Warmisham, optical director, Taylor & Hobson, Leicester, England; and Malcolm G. Townsley, Bell & Howell Company. Co-hosting the visitors were also members of the A.S.C. and So. Calif. Optical Society.

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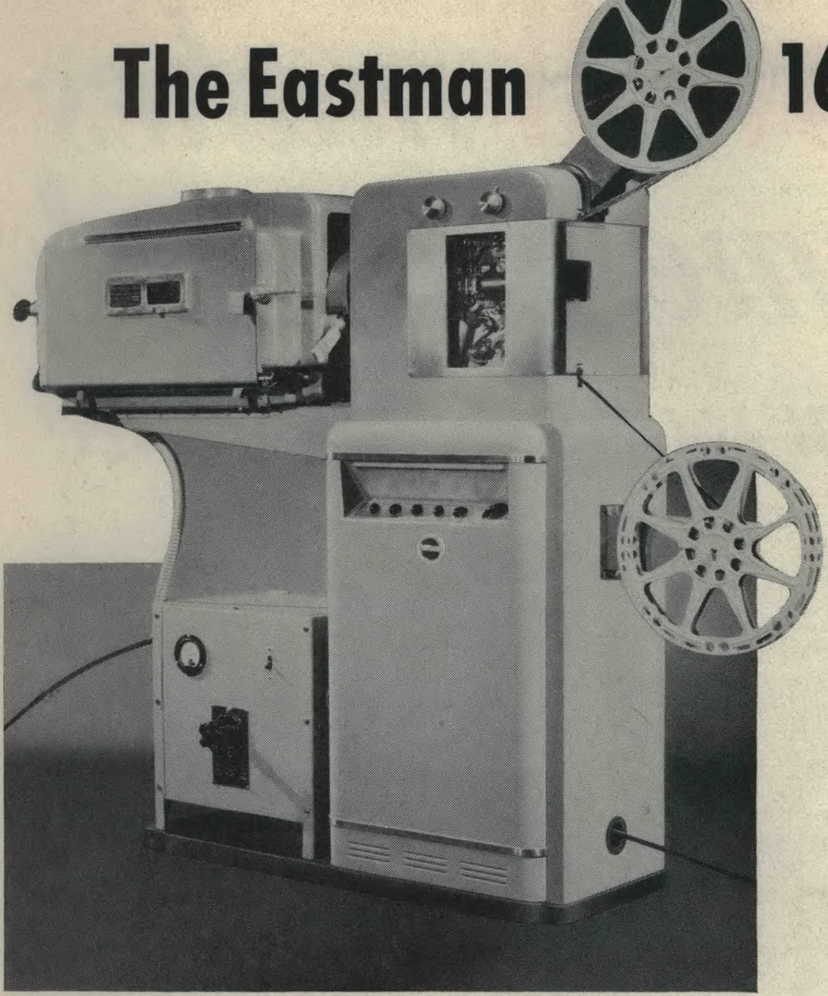

HERE is a precision-designed, craftsman-built projection instrument which delivers a screen image and sound reproduction from 16mm. film that compares favorably with the performance of the most advanced 35mm. equipment. You can be certain of theater-quality projection of your 16mm. sound films when they are shown with an Eastman 16mm. Projector, Model 25. The standard model may be fitted with tungsten or carbon arc lamp.

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STREET______________________________

CITY________________ZONE________STATE__________

Motion Picture Film Department
Eastman Kodak Company
Rochester 4, N. Y.

East Coast Division
342 Madison Avenue
New York 17, New York

Midwest Division
137 North Wabash Avenue
Chicago 2, Illinois

West Coast Division
6706 Santa Monica Blvd.
Hollywood 38, California

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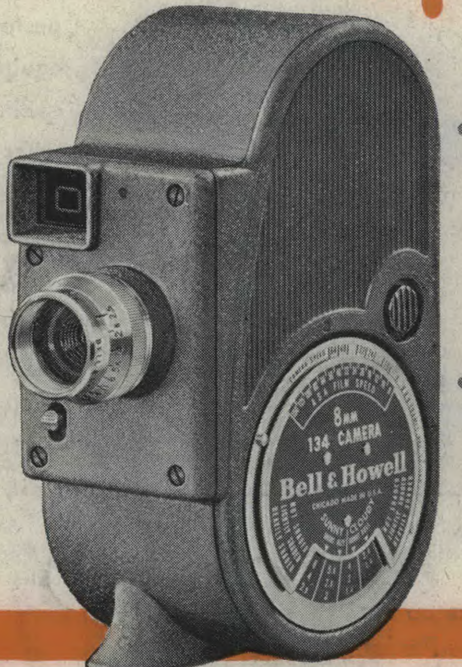

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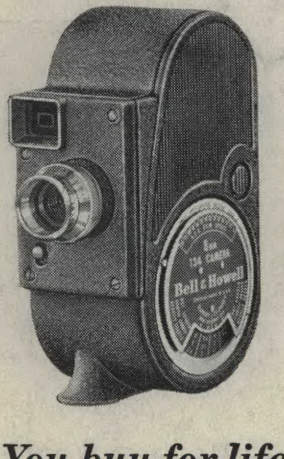

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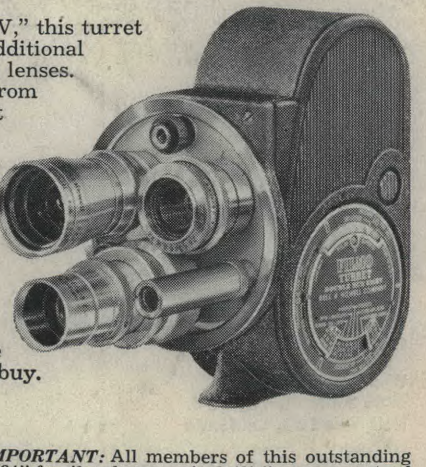

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